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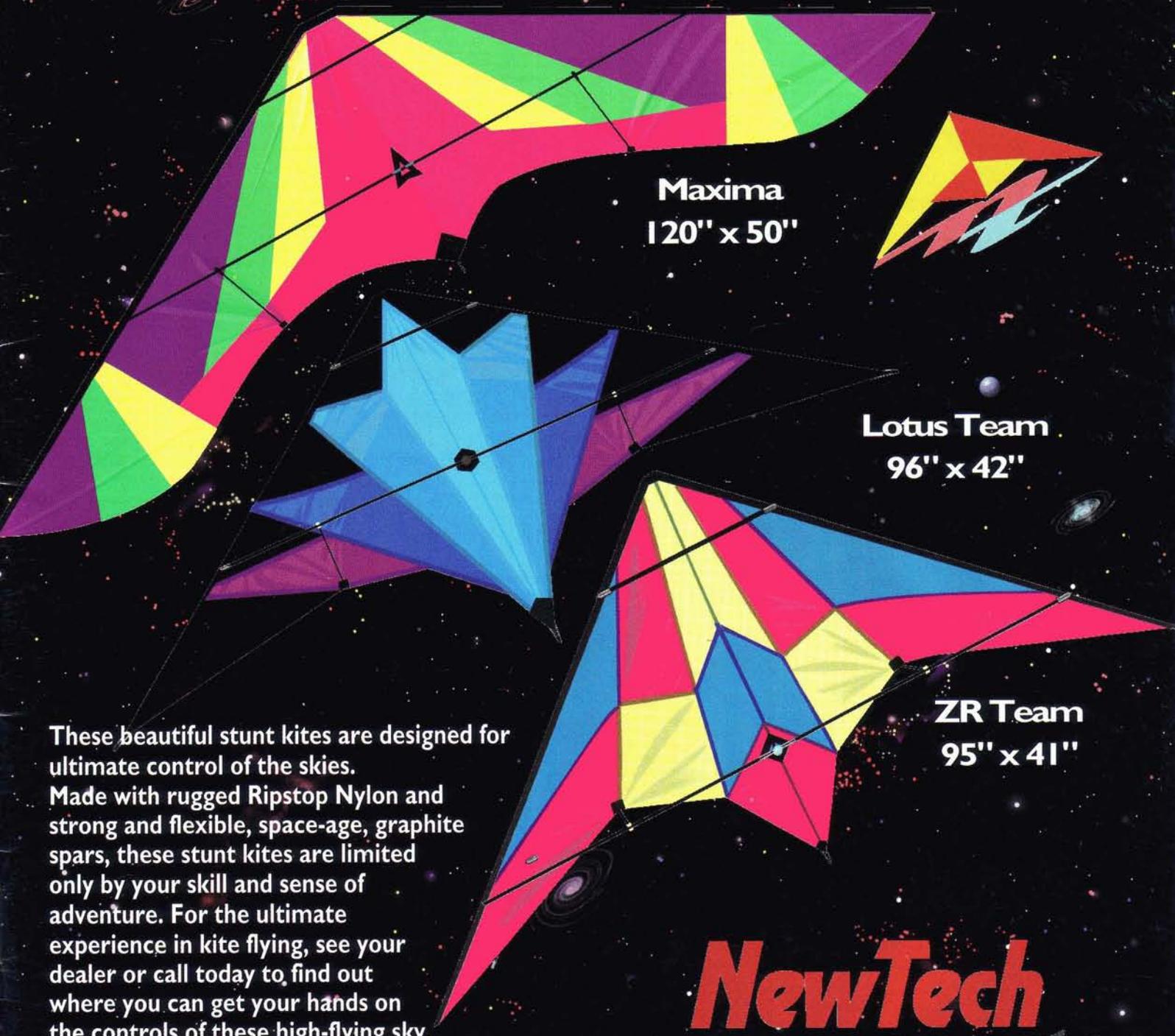
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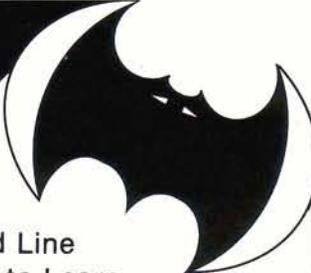
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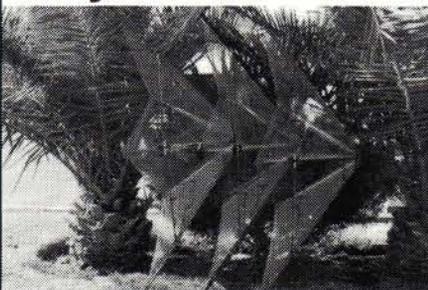
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Kitelines

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Kite Lines is the comprehensive international journal of kiting, uniquely serving to unify the broadest range of kiting interests. It is published by Aeolus Press, Inc. with editorial offices at 8807 Liberty Road, Randallstown, Maryland 21133, USA, telephone 410-922-1212, fax 410-922-4262.

Kite Lines is endorsed by the International Kitefliers Association and is on file in libraries of the National Air and Space Museum, Smithsonian; National Oceanic and Atmospheric Sciences Administration; University of Notre Dame Sports and Games Research Collection; and Library of Congress. It is included in the *Index to Craft Journals* published by the Crafts Council of Australia.

Publisher: Aeolus Press, Inc.

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Subscriptions: In the U.S.A. and possessions, \$14.00 for one year (four issues), \$26.00 for two years (eight issues); all other countries, \$18.00 for four issues, \$34.00 for eight issues (includes air-lift service). Foreign payments must be in U.S. dollars through a U.S. bank or the U.S. Post Office. Single copies are available from the finest kite stores worldwide, or for \$4.00 plus \$1.50 shipping (surface) from the journal offices.

Mailings: Occasionally *Kite Lines* makes its list of subscribers available to organizations offering information, products or services of interest to kites. Subscribers may be excluded from such lists by contacting *Kite Lines*.

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Write to Kite Lines at P.O. Box 466, Randallstown, MD 21133-0466, USA.

Advertising rates and information sheet is available upon request.

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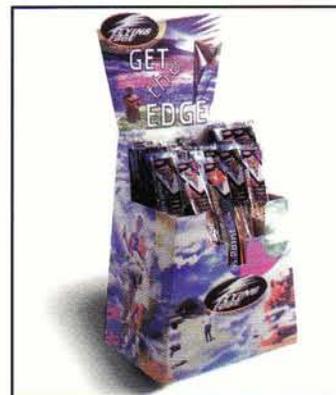
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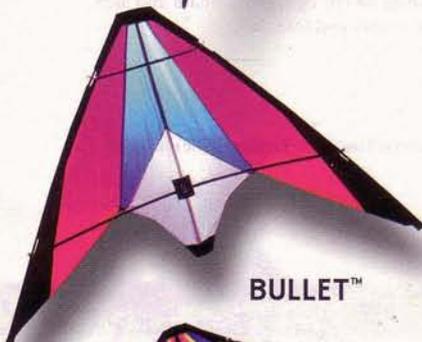
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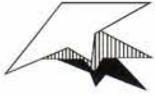
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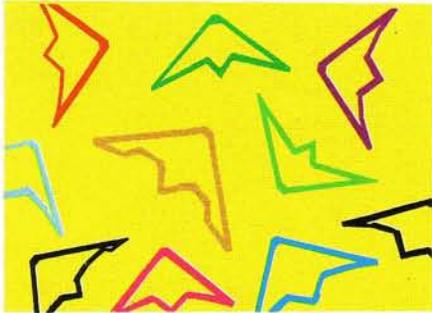
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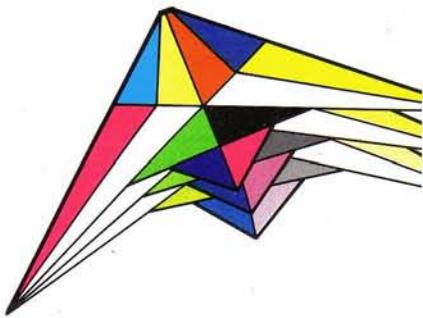
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Easy to launch, hard to crash, the wet and wild wing of the French WIPICAT system will whip you through the waves. Photograph by Bruno Legaigoux. (Story by Pierre Fabre on page 20.)

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LETTER FROM THE PUBLISHER

A Vehicle of Worth

WE YIELD THIS SPACE TO AN UNUSUAL LETTER OF PRAISE AND CHALLENGE FROM TWO DISTINGUISHED SUBSCRIBERS

During the last 15 years or so since we first encountered your magazine, our childhood interest in flying kites has matured into the realization that kites form a true adult art, a varied sport, an engineering science in swift change by the use of the most modern materials, and a small but lively growing industry nationwide. All of these require a spokes-journal or two to tie together the adherents, support the market, and keep high standards alive. You have made such a journal.

Indeed these virtues might be claimed for other activities, say windsurfing. But we find much more importance in kiting. For kites have a universal appeal, a very widespread attraction. The air is everywhere; mountain, beach or woods are not. Kites can be made for mere pennies by young children, or for tens of thousands of dollars in high-tech shops. They can draw on the athletic talents of strong young people, or be managed with pleasure by the very old. They allow fierce competition as well as quiet contemplation. Some distinguished contemporary artists have entered kiting; kite design and decorations are as old as cloth and as worldwide, found on all the continents.

Kites form a free land whose frontiers border on ballet and international racing, folklore and play, fine arts and structural design, and thematic parks, all made participatory and openly welcoming.

Our own longest concern has been with the education of children in science, seen by

many as a key task before our country for the next decades. The flying of kites, so democratic, so accessible, is in no way passive or vicarious like most of the media. It is rooted on the skill and wit of improvised aerodynamics, giving a fine hands-on entry to science and engineering. It flowers in

KITING HAS THE RIGHT BREADTH OF ENTRY AND THE DEPTH OF PENETRATION THAT IS NEEDED FOR AN ACTIVITY THAT CAN DRAW AND ENRICH MANY YOUNG PERSONS FOR A WEEK OR FOR A LIFETIME.

new ultrastrong sheets and fibers, and in new understanding of scale and flow. It has the right breadth of entry and the depth of penetration that is needed for an activity that can draw and enrich many young persons for a week or for a lifetime.

Nor does it have only one tone of voice, one path; it is open like the arts to any mood, any style, any language. That makes it a vehicle of unusual worth for spreading the attitudes of purposeful craftsmanship and devoted attention that alone can

bring scientific literacy.

The butterfly-sized kites of some celebrated veteran model-builders were a revelation to us a few years back in the wide range of size that still works with familiar kite forms done in new materials. That kind of result requires professional devotion, and the recruitment of a few young people to replace our senior kiting innovators is an urgent task.

Recent European and Asian advances are striking, and American kiting is sure to grow for a long time. We wish you good luck as you and your staff continue to lead that growth.

Philip Morrison, Phylis Morrison

PHILIP MORRISON, Institute Professor of Physics, MIT (emeritus)
 PHYLIS MORRISON, Outstanding Science Teacher Citation, 1993, The Exploratorium, San Francisco
 The Morrisons created the public television series "The Ring of Truth." Philip Morrison wrote the perceptive article "Kites of Makar Sankranti" for the Summer 1989 Kite Lines.

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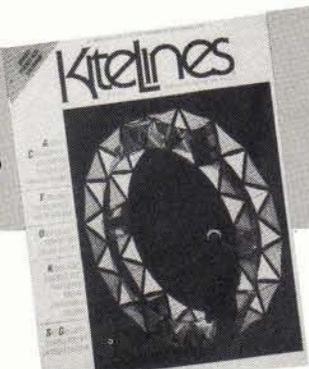


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LETTERS

Cross...



Sculpting

Thank you for two excellent articles on art/sculpture/kites in the Summer-Fall 1993 *Kite Lines*. As a recent novice kite enthusiast and sculptor for 30 years, these two articles coincided precisely with my latest creative efforts—flying sculpture. Was I surprised.

Both articles "The Cross Deck: A Cellular Sensation" by Carl Crowell and "Istvan Bodóczy" by Valerie Govig, addressed that portion of kiting which holds the greatest interest for me. I never really expected this subject area to be covered when I turned to the first article, which I quickly digested in detail. Then, lo and behold, there was also a second article with a focus on sculpture in kiting. Simply stated, I was thrilled, grateful and inspired. Hopefully there will be more articles similar in subject matter in the future.

Any additional information concerning art/sculpture/kites... would be greatly appreciated. The depth, breadth and quality of *Kite Lines* is terrific. Please keep up the good work. The next issue is always looked forward to with anticipation.

—Gary Walvoord
Spokane, Washington

Politicking

Never would I criticize *Kite Lines* for misquoting; your painstaking diligence is the paradigm.

Contextually, however, I feel that your editorial in the Summer-Fall 1993 issue may have left the impression that I revel in the sometimes dirty politics of the kite world. How silly! Some kite people's behavior, as in the wider world, is petty, mean-spirited and self-destructive.

Insofar as politics is about interpersonal relationships, ultimately the most interesting and satisfying aspect of living, I find kite politics always interesting, sometimes fascinating and occasionally sobering.

We should not ritually demean our "kite politicians." Their tasks are difficult, often thankless and absolutely necessary.

—Peter Lynn
Ashburton, New Zealand

Balancing

...a pleasure to receive the Summer-Fall 1993 *Kite Lines*. Most exciting articles to me were those of artist István Bodóczy and grandmaster Eiji Ohashi. I strongly like the

...currents

pictures, sculptures and not least the subtle kites of Bodóczy. They reinforce my idea that kiteflying in a way is poetry.

I was surprised by Ohashi's Magic Balancer. Although it reminds me of Chinese centipedes, it is sufficiently new in presentation and simplification (one line). At one time I was involved in some experiments with this way of stabilizing. Only two minor remarks:

1. He is fully right to use a string between the extreme points of the Balancer and the kite's nose. But why did he not mention it in the text nor represent it in the sketches? It is hardly visible in the photos.

2. The kite with Balancer flies flat (on the wind), but if you do what Ohashi recommends, attach the flying line to the kite's nose, the line will be almost horizontal as well as the whole train. I understand his purpose, to limit the line stress, but I prefer a train to rise more steeply, though it may pull more strongly. The better visibility seems to me a weak argument.

I was happy to find the old *good simple classic*...the Sac City kite!

At first reading I did not fully understand your Letter from the Publisher on politics in kiteflying. So I delved into my dictionaries to learn a second meaning of politics which I did not know before. Now I completely understand "For Heaven's Sake." It is the reason why I never wish to be involved in commercial affairs relating to kites.

—Harm van Veen
The Hague, Netherlands

Crediting

My main purpose for writing you concerns the photograph of Jan Fischer's kite on page 25 of the Spring-Summer 1992 *Kite Lines*. According to the photograph's caption, the original kite was designed by Charles Lamson in 1898.

I was a little surprised that Lamson was given credit for this design because I thought that another turn-of-the-century kiteflier was responsible.

I first saw an illustration of the kite in "Scientific Kite-Flying," an article by J.B. Millet which was published in the May 1897 issue of *The Century Magazine*. In this article, Millet credits himself with the design. I did check Clive Hart's book and, sure

Continued on page 14...

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The A.L.D. (Agreeable Little Delta)



By Kevin Shannon

Many people have searched for the perfect small delta. Although this kite is far from being the ultimate, it flies remarkably well for such a simple design.

Its ancestry is rooted in at least a dozen different designs, but it most resembles a kite made a few years ago by Cloud Pleasers. The original kite that this is based upon was made by a local craftsman named Daniel Gerlach. I've refined its form over the years to the kite you see here.

Materials:

- 1 yard of .75-oz. ripstop nylon
- adhesive-backed Dacron® polyester tape ("crack-n-peel") for reinforcements
- 1 grommet or 2" of $\frac{3}{8}$ " grosgrain ribbon for the tow point
- (2) 18" x $\frac{3}{16}$ "-diameter dowels (wing)
- (1) 16" x $\frac{3}{16}$ "-diameter dowel (spreader)
- (1) 28" x $\frac{3}{16}$ "-diameter dowel (spine)

Wings:

1. Cut two rhomboid shapes $24\frac{3}{4}$ " x 11" with an offset of 3" (see figure 1). Cutting each rhomboid from a different color makes a more attractive kite.

2. Flip one of the rhomboids over so that it is a mirror-image of the other. Fold and sew a $\frac{1}{4}$ " hem on each of the short sides on both pieces.

3. Cut each rhomboid shape into two pieces across the long diagonal. Now divide the pieces into two wing sets, each containing one piece from each rhomboid.

4. For each set, stack the two pieces, good sides together, and join them with a straight stitch along the shorter of the two long sides. Your stitch line should be $\frac{1}{8}$ " from the edge. Be sure to backstitch at the beginning and end of each row of stitches to lock your stitch (figure 2).

5. Turn each wing over and sew the seam flat toward one side.

6. On the front of a wing, draw a pencil line on one edge as a fold line for the wing spars. This line is $\frac{1}{2}$ " from the edge of the wing. Do the same for the other wing but with the pencil line on the opposite edge. On each pencil line, measure up from the



The A.L.D. leaps into the sky.

bottom 14" and make a pencil mark for the spreader pocket locations (figure 3).

7. Cut two $2\frac{1}{2}$ " squares of ripstop and fold each on the diagonal twice. Sew a stitch line $\frac{3}{8}$ " from the second fold on each one to form the spreader pockets (figure 4).

8. For each wing, fold on the pencil line toward the back. Sew the wing sleeve with a straight stitch, $\frac{3}{8}$ " from the edge. Fold the tip up and sew across the bottom of each wing sleeve, backstitching, to close off the sleeve. Leave a break in the stitching 1" long about 1" from the bottom to allow for insertion of the wing spars. Insert the spreader pockets at the 14" mark on each wing sleeve. The center of the $\frac{3}{8}$ "-wide tunnel on each spreader pocket should align with the mark. At the top, trim off any of the wing sleeve that overlaps the inside edge of the wing (figure 5).

Keel:

1. Cut a piece of ripstop in the shape of a right triangle. The two short sides are $7\frac{1}{4}$ " and $14\frac{1}{4}$ ". The long side will measure about 16". Align the grain of the fabric with the

two short sides (figure 1).

2. Cut a triangular piece of adhesive-backed Dacron as a reinforcement patch. Position it at the tip of the keel.

3. Fold and sew a $\frac{1}{4}$ " hem along the two short sides of the keel.

4. Insert an $\frac{1}{8}$ " grommet as the line attachment point at the reinforced tip of the keel. Alternatively, you can sew a folded 2" piece of $\frac{3}{8}$ " grosgrain ribbon at the tip (figure 6).

Joining Wings and Keel:

1. Cut a piece of ripstop 1" x 30". Fold this in half lengthwise. This will become your spine sleeve.

2. Sandwich the keel between the two wings. The wings should lie with the good sides together and the back of the keel should be $4\frac{1}{4}$ " from the bottom edge. Insert the wing-keel sandwich into the 1" x 30" folded spine sleeve. Be sure that extra sleeve material is at the top and bottom. Sew all of the pieces together $\frac{3}{8}$ " from the folded edge of the sleeve. Leave a 1" break in stitching at the bottom of the sleeve, about $\frac{1}{4}$ " from the bottom (figure 7).

3. Sew across the ends of the spine sleeve to close it off. Trim off the extra sleeve material about $\frac{1}{8}$ " from the stitch line. For extra strength, cut some adhesive-backed Dacron rectangles about $\frac{1}{2}$ " x 2" and fold them over the top and bottom ends of the sleeve to prevent the spine from poking through in a crash (figure 8).

3. Sew across the ends of the spine sleeve to close it off. Trim off the extra sleeve material about $\frac{1}{8}$ " from the stitch line. For extra strength, cut some adhesive-backed Dacron rectangles about $\frac{1}{2}$ " x 2" and fold them over the top and bottom ends of the sleeve to prevent the spine from poking through in a crash (figure 8).

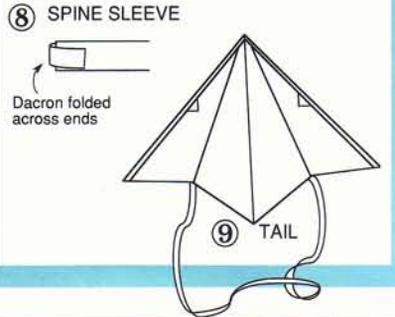
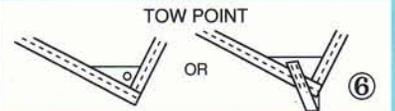
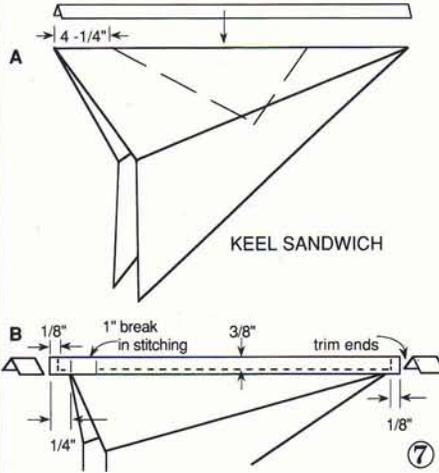
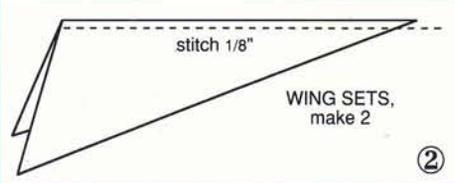
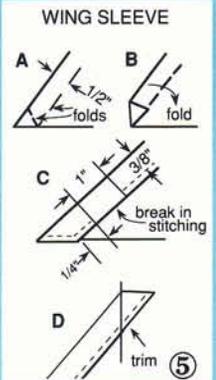
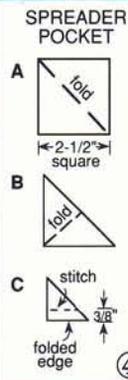
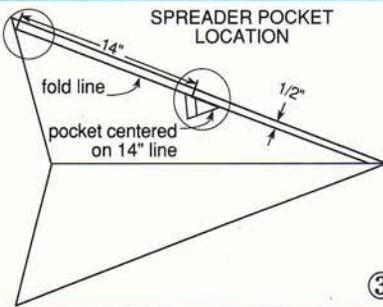
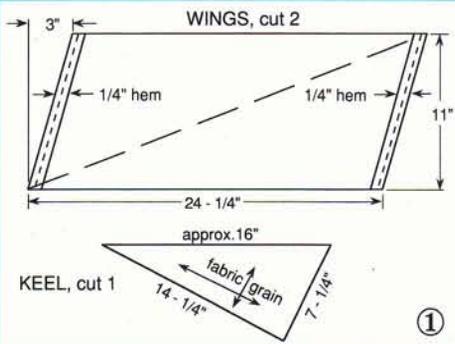
Finishing Touches:

1. Cut a piece of ripstop, pieced together if necessary, to form a tail 1" x 70". Sew the ends of this tail onto the back at the bottom of each wing center seam. This creates a very effective loop tail (figure 9).

2. Cut the $\frac{3}{16}$ " dowels. The spine should be cut to fit, with all other sticks to the stated dimensions. The ends of the spreader can be pointed slightly in a pencil sharpener to allow for easier insertion.

3. Attach your flying line (20 lb)...and enjoy!

KEVIN SHANNON is an active kiter and runs the Carlisle Kiteworks in Pennsylvania.



A.L.D. drawings, not to scale, by KEVIN SHANNON and the Kite Lines staff

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enough, the design is attributed to Lamson. I do not have a copy of Varney's article, which I presume is "Kite-Flying in 1897" which was published in the May 1898 issue of *Popular Science Monthly*.

Was Hart mistaken or does Varney's article specifically name Lamson as the designer? Even if this is the case, I would have to give priority to Millet since his article appeared a year earlier. Also, the kite design seems quite unlike the "Aerocurve" kites that Lamson is best known for.

—Gordon S. Schmidt
North Canton, Ohio

Gordon, we believe you are right, for the reasons you gave as well as the fact that George Varney's work is not noted for its accuracy. Thus are errors in kite history perpetuated. Thanks for correcting this one with your sharp spotting.

Correcting

In the Summer-Fall 1993 *Kite Lines*, an Arch Ribbon with metric numerals shown in "In the Wind" (page 65) was incorrectly credited. It was made by Frank Schwiemann of Germany, to a design by Étienne Veyres of France.

In the same issue, the front view drawing of the Cross Deck kite by Carl Crowell (page 27) was incorrectly presented with solid parts where background should have shown through. This obvious mistake was *not* that of the illustrator, Ron Petralito.

In the kite reviews in the Winter 1993 *Kite Lines*, we misunderstood Dan Flintjer when we said the Buffalo Cody Kite Co. was "folding its tent" (page 18). The Buffalo Cody Kite Co. is definitely *not* out of business. It may be reached at 5129 Lynwood Avenue, Blasdell, NY 14219; tel: 716-824-6688.

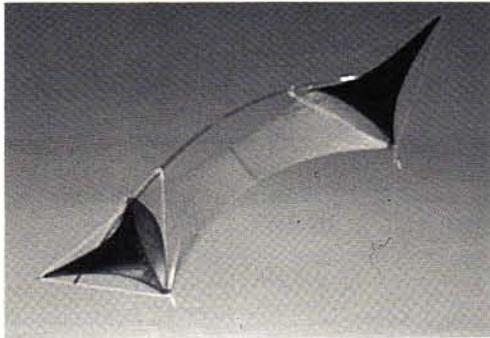
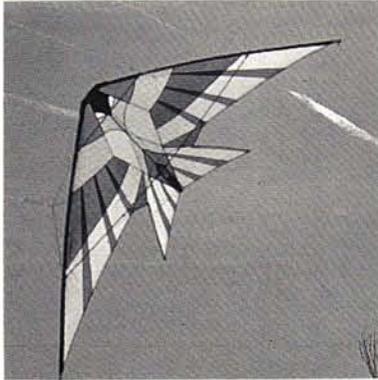
Also in this reference, the sail area of the Cody Kite by OptiKites (page 17) was given in square feet instead of square inches. Its proper measurement is 2,016 square inches.

Kite Lines regrets the errors.

Write us a letter! Anything you write to *Kite Lines* may be considered for publication, so please mark it "not for publication" if you want no doubt to be left about it. Address to: *Kite Lines*, P.O. Box 466, Randallstown, MD 21133-0466, USA. Or fax us at 410-922-4262.

Kestrel, Deca, Bugs, Barrage & Bee

By Michael J. Graves, Ilene Atkins, Mel Govig & Valerie Govig assisted by Steve Polansky & the *Kite Lines* staff



Top down, the Kestrel by Sky Delight Kites and the Synergy-Deca by Guildworks Kite Studio.

Kestrel by Sky Delight Kites

The Kestrel from Sky Delight (Joel Scholz) features some of the most appealing graphics that we have ever seen on a stunt kite. After hearing good things about the kite from a few fliers, we were eager to try it for ourselves. Would it fly as good as it looks?

The Kestrel's construction is excellent in all respects. The sail is sewn from hot-cut $\frac{3}{4}$ -oz ripstop nylon, stitched with a walking zigzag. The frame is Beman 6.3 MM Strong, and it features molded plastic fittings. The leading edge is somewhat curved, inducing a nice camber into the sail. The sail is quite shallow, measuring $6\frac{3}{4}$ " at the standoffs.

Our sample kite was test flown in winds ranging from 4 to 10 mph. We used 110-foot sets of 80-lb or 135-lb Spectra line, depending on the windspeed.

The Kestrel exhibited a small but completely controllable amount of oversteer. Its turning radius was well inside the wingtip. Straight-line tracking was good. The Kestrel's forward speed was quite fast, as was its rate of turn. The usable wind window was large. The kite's handling was generally solid, suitable for competition.

By most definitions, the Kestrel is not an ultralight—though it did perform sur-

prisingly well in winds below 5 mph, showing only a minor reduction in usable window. We found that moving the bridle clips $\frac{1}{4}$ " toward the nose was necessary when the wind dropped below 6 mph. As the wind increased, the Kestrel generated a considerable amount of pull and a lot of noise.

The kite arrived with the outhauls setup short for optimum stalling ability. We found it easy to perform snap stalls, as well as slides across large portions of the window. The short flight manual that comes with the Kestrel gives a nice overview of bridle setup theory for those who care to experiment.

Most of the advanced maneuvers were possible, though the combination of the tail surfaces and the relatively shallow cut of the sail make the Kestrel a bit unforgiving. Fumbling a radical move often caused the kite to end up in an unrecoverable position, floating to the ground.

On the ground the Kestrel offered more limited capabilities. Leading edge launches were no problem, but tumbling into an upright position was difficult. However, with outhauls set short for stalling, we could execute perfect landings easily, even directly downwind. Launching and landing aside, the Kestrel shows greater prowess in

KiteFlite: A Computer Program for Simulating Your Stunt Kite Routines

This program for IBM-compatible personal computers was originally developed by Peter van den Hamer in The Netherlands for use by the Dyke Hoppers stunt kite team. The program allows fliers to visualize precision maneuvers and develop ballet routines before taking kite in hand.

The KiteFlite program reads script files that describe each figure or routine, then displays them on the computer screen. The display is simple, but the motion of the kites is very realistic. The program includes scripts describing over 50 team and individual precision maneuvers, as well as a sample ballet routine from the Dyke Hoppers.

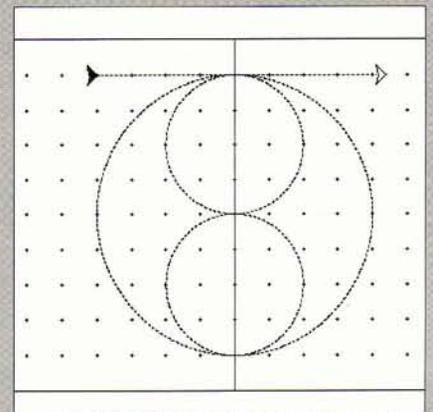
Developing team choreography usually involves many sketches, detailed notes and in-the-field experimentation. All of this is needed to insure that the team members all have the same understanding of the routine. KiteFlite scripts can help the team learn the routine as well as create new maneuvers.

The KF1 script language is quite simple to use. Anyone with some experience in BASIC or DOS batch language should be able to create custom routines. KiteFlite will allow up to 10 kites in each

simulation, and each kite can be a different color. The program can also leave a colored trail behind each kite to aid in visualizing each figure. Almost any type of move can be written using the KF1 script.

For the casual flier, KiteFlite provides an interesting method of studying compulsory maneuvers. For teams, KiteFlite is a powerful new tool for developing multikite choreography.

A demo version of KiteFlite is available on the Internet from the rec.kites archive. The program will also be included in the new book, expected soon, *Stunt Kites to Make and Fly II* by Servaas van der Horst and Nop Velthuisen (see page 23).



Example of your computer screen using KiteFlite software. Naturally, with movement the kites look more realistic.

the air than on the ground.

With all his stunt kites (Neptune, Hummer, Kestrel and others in the pipeline), Joel Scholz did not start out to make high performance kites. He wanted to produce good graphics on stunters. That he has certainly done with this kite. But don't be fooled by appearances, the Kestrel is *both* a looker and a performer. —M.J.G./I.A.

The Synergy-Deca by Guildworks Kite Studio

The Synergy-Deca by Guildworks Kite Studio (Mark Ricketts) is one of the few stunt kites that really deserve the adjective *unique*. The Deca is a *tensegrity*, a Buckminster Fuller creation which is defined as a structure that is made up of isolated members (the spars) under compression from a set of tensioned lines (the rigging). In practice this means that the sail, rigging, and framing members work cooperatively to maintain the kite's shape.

Assembling the Deca takes patience the first few times, though the owner's guide offers a good description of the procedure. We recommend assembling the kite a few times indoors before you attempt assembly outside, where the wind can blow things around.

The Deca's frame is three-wrap carbon, with a spare four-wrap center spar for very windy days. An ultralight version is also available, using two-wrap sparring. Each spar end is color coded and goes into the cap with the matching colored stripe. The sail is made out of 3/4-oz ripstop polyester, with Dacron® polyester reinforcements where it joins the frame. Hems and seams are all double-turned. Overall, the Deca is quite well made.

As a quad-line kite, the Deca invites comparison to the Revolution, though it is very different. The Revolution can be described as a pair of sails sharing a common leading edge. As such, the attitude of each half can be adjusted quite independently of the other. In contrast, the Deca is essentially a single sail with winglets. The Deca's sail can be warped in flight, altering the attitude of either half of the wing, and its winglet.

Test flights began using a set of Rev 1 handles on 75 feet of 80-lb Spectra line in a 6 mph breeze. It was apparent that the Deca

moved backward equally as well as forward. Spinning about its center was possible, though a bit more difficult than we were used to.

The Deca did not move sideways very well, presumably because of the dihedral created by the winglets. Later flights in stronger wind showed improved but still limited sideways movement. Performance was improved in winds over 8 mph. In general, the Deca behaves like a hybrid of dual- and quad-line kites.

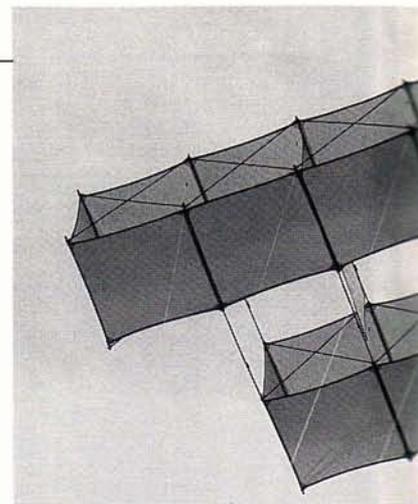
The springlike loading of the frame made for some interesting handling. Diving into snap stalls, the Deca seemed to almost bounce as the frame reacted to the move. Holding the kite in one place, we could see the frame constantly reacting to slight variations in the wind.

With all its spars and rigging, Rev 2 style 3D flying is not practical, but the Deca has its own type of 3D capability. With the kite overhead, a quick pull on the upper lines caused the Deca to stall and tumble, wrapping itself in the flying lines. Unwinding was a simple matter of a quick pull on the lower lines. In exploring the Deca's 3D potential, we tried a 37-foot set of 80-lb Spectra lines, but found we had greater freedom to tumble and recover on the longer lines. And it's the playful tumbling with this kite that we relished. When you're tired of the same-o same-o competition maneuvers, the Synergy-Deca offers something unique. —M.J.G./I.A.

Soft Bugs by Martin Lester

Here's the latest in soft flying sculpture by the inventive Martin Lester of England: three bugs, the Ladybird, the Bumblebee

Left clockwise, Ladybird, Firefly and Bumblebee. Near right, Sauls Barrage kite. Far right, Yakko Bee.



and the Firefly. Each comes in two sizes, roughly one yard high or two yards high. We tested all three in their smaller versions. Our models were early runs of the series and were appliquéd, but we understand that the later production kites will have printed areas.

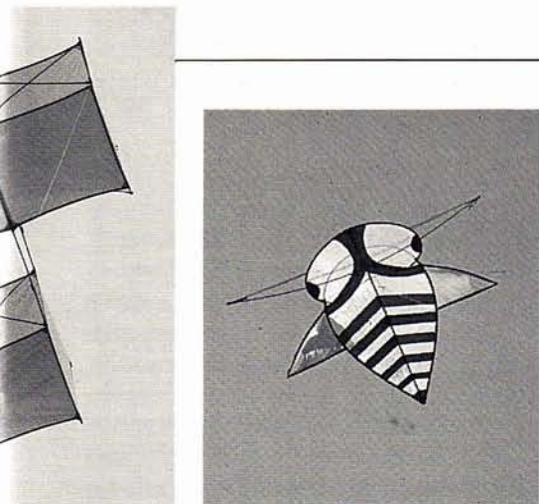
No assembly is required except snapping on the tail. In the right winds (5 to 8 mph), the bugs fly nicely without a tail, but not without supervision. With added tail, our samples flew better in light to moderate winds, though not at a very high angle. (The Ladybird had a slight edge in performance, but nothing significant.)

The angle did not spoil it for us. We have always especially liked the rare kites that combine stable flight and kinetic art. These bugs are a great example. In flight, their "legs," formed by the keels, flutter in the wind and turn the critters busy.

The Lester bugs represent an "in" joke. Parafoil makers struggle to create keels without slack, keels that won't ripple to disturb the profile or performance of their prized steady fliers. But Martin Lester has taken a negative element and made it positive—even exaggerated it. The result is these cute baby foils with "bad" keels. They made us laugh, they made us happy. And on top of that, they're sold at a reasonable price. —M.G./V.G.

Sauls Barrage by One of Jerry's

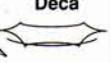
It was built in tribute to the famous Naval Barrage Kite designed by Harry Sauls (who in turn worked from a Lawrence Hargrave original) and used by cargo ships in World War II to foul strafing airplanes. However, maker Jerry Sinotte (One of Jerry's Kites) has sensibly adapted his Sauls Barrage to meet the demands of today's materials and kitefliers.



As you might expect from Jerry's respected studio, fittings play a big role in the construction and performance of this kite. At first you may find the tensioning lines and fittings for the cross spars a little overdone. However, as you assemble and adjust the kite, you come to appreciate the utility of every line and fixture. Through a series of well-placed tensioning lines and special extendable longerons, it is possible to bring the kite into perfect tension and shape in even the wettest or driest of conditions. The price one pays is a rather lengthy setup.

Once assembled, the kite's bridle lines are easy to attach to the forward leading edge. The placement of the bridles allows the kite to be "pumped" up into stable winds, to assume a very flat glide attitude backwards and to climb to a good sharp angle. The Barrage does not pull heavily on the line, but I think it would lift a small camera. The flight behavior more resembles a delta's than a box's. The kite rotates vertically around the tow point to absorb gusts, yielding a fairly constant line tension in winds between 6 and 20 mph. Because of the large amount of vertical surface, the kite tends to be a wind seeker, turning quickly toward changing currents. For this reason the Barrage should be carefully attended if you are flying among other people. A combination of high angle of flight and quick response to wind changes could make you unpopular among neighbors with low-angle, long-tailed kites.

A nice feature: the Sauls Barrage folds up to 34"x3"x6". As for appearance, we admired the geometric simplicity and elegant flight so much we even grew fond of the color of our sample, electric lime green. A recent color preference survey indicates that the most disliked hue is chartreuse. But lit with

Stunters		DATA CHART		One-Liners			
Kestrel	Synergy-Deca	Name of Kite		Ladybird/Firefly	Bumblebee	Barrage	Yakko Bee
		Manufacturer					
Sky Delight	Guildworks	Retail Price		M. Lester	M. Lester	One of Jerry's	Schwiemann
\$ 240	\$ 320	Sail Material		\$ 60	\$ 60	\$ 385	\$ 150
RN	RP	Leading Edge Material		RN	RN	RN	RN
DT	n/a	Framing Materials		n/a	n/a	n/a	n/a
CFt	CFt	Fittings		n/a	n/a	CFt	CFr, B
MP	MP	Dimensions (in.)		n/a	n/a	MP	V
92 x 41	88 x 21	Sail Depth at stand-offs (in.)		32 x 32	33 x 32	80 x 60	26 x 21
6.75	22.0	Sail Area (sq.in.)		n/a	n/a	n/a	n/a
1240	1156	Weight (oz.)		500	530	4700	253
11.625	6.125	Sail Loading (oz./sq.ft.)		3.5	3.5	32.0	2.0
1.35	0.76	Suggested Wind Range		1.0	0.95	0.97	1.14
3 - 20	3 - 30	Suggested Line (lbs.)		5 - 15	5 - 15	6 - 25	8 - 15
80 - 150	80 - 150	Skill Level Required		20	20	150	20
N	N	Assembly Time (minutes)		N	N	I	S
1	2	Ease of Launch/Re-launch		0	0	15	3
VG	VG	Ease of Landing/Ground Work		G	G	VG	E
G	VG	Straight Speed		G	VG	VG	VG
F	n/a	Speed in Turns		n/a	n/a	n/a	n/a
F	n/a	Precision/Tracking		n/a	n/a	n/a	n/a
G	G	Amount of Pull		n/a	n/a	n/a	n/a
M	L	Amount of Noise		L	L	M	L
H	S	Visual Appeal/Graphics		n/a	n/a	n/a	H
E	E	Workmanship		E	E	VG	E
E	G	Portability		E	E	E	E
VG	E	Durability		E	E	VG	VG
VG	E			E	E	VG	E

NOTES: Retail price (US dollars) is "advertised" or "suggested." Wind range (mph) covers minimum and maximum speeds deemed suitable by our evaluators. Dimensions are in the following order: width x height. Measurements and (usually) drawings are made with the kite standing on the floor facing the viewer. Materials: RN—Ripstop Nylon, RP—Ripstop Polyester, DT—Dacron Tape, WD—Wooden Dowels, B—Bamboo, FG—Fiberglass, GR—Graphite, EP—Epoxy, CF—Carbon Fiber, r—Rods, t—Tubes, MP—Molded Plastic, V—Vinyl. Speed: SL—Slow, M—Medium, F—Fast. Skill levels: N—Novice, I—Intermediate, SK—Skilled. Pull: L—Low, M—Medium, H—High. Noise: S—Silent, L—Low, M—Medium, H—High. Other ratings: P—Poor, A—Acceptable, G—Good, VG—Very Good, E—Excellent, n/a—not applicable.

sunshine against a sky of blue, we thought our lime Sauls Barrage was handsome.
—M.G.

Yakko Bee by Frank Schwiemann

In a trip to Düsseldorf last fall, I was fortunate to spend several days with Frank Schwiemann and his family. Frank had already gained attention as an innovative kitemaker on his home turf. Now Carlisle Kiteworks is importing his Yakko Bee to the U.S.

The design adaptations to ripstop and graphite composite from bamboo and paper are freshly engineered and meticulously executed to achieve a kite that flies very much like the bee kites of Japan, such as the admired variants by Satoshi Hashimoto. The synthetic materials let you relax and enjoy flying the Yakko Bee; it is not too pre-

cious to risk to the elements.

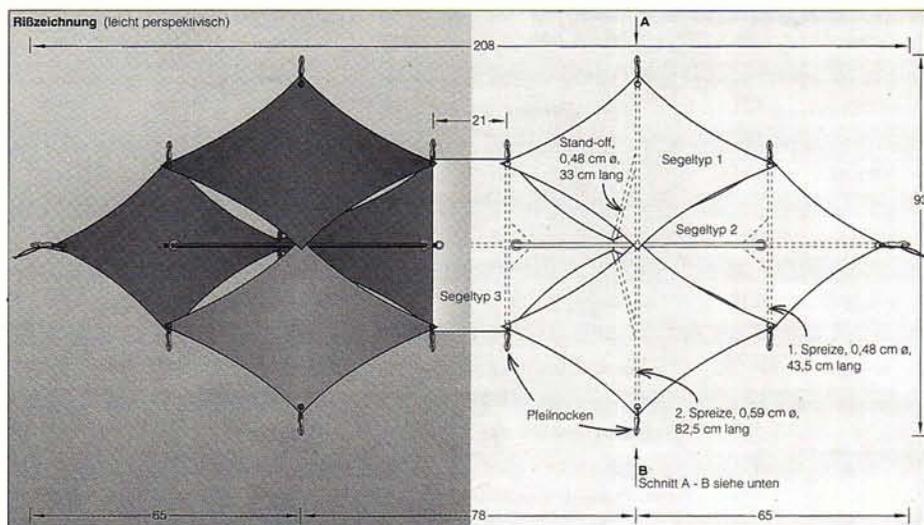
On the other hand, the effective graphics ask to be hung as art between flights. The Yakko Bee is true and superb kite art. It may be derivative art, like a good translation of a foreign literary work, and in the same way it has its own creativity. I expect even Hashimoto would be delighted to own one.

Like its ancestors, the Yakko Bee is a one-line maneuverable kite. While not a fighter kite as such, it does ask for the same skills if you want to achieve the full effect of the hummer's drone and the darting movements of the bee. But I have never flown a bee kite that emitted such a good, strong buzz at such a low level of flight.

As I always admit, I have rarely met a fighter kite I did not like. I fell in love with this one at first flight.
—M.G.

Upwinds & Downdrafts

By Maurizio Angeletti, Ilene Atkins and Valerie Govig



The Paradox quad-liner is one of the novelties in Schimmelpfennig's *Neue Lenkdrachen*.

Best Schimmelpfennig Yet

Neue Lenkdrachen und Einleiner bauen und fliegen (New Stunt Kites and One-Liners to Make and Fly) by Wolfgang Schimmelpfennig (Niedernhausen, Germany: Falken, 1993), in German, softcover, 80 pages, \$22.95.

This fifth book by Wolfgang Schimmelpfennig is for me his best to date. Whereas the basic style is not particularly different from previous works by the same author (a style which has clearly influenced scores of other German books in recent years), there's an air of freshness here due to several factors.

First of all, the production is technically above reproach. The pictures (all taken by the author and of very good quality) are sharp and effective and their subjects are carefully chosen.

Almost all the kites are credited, although often in a confusing way. The reader who doesn't know Randy Tom or Michel Gressier will wonder which kites belong to these makers, because credits are not placed next to the related pictures.

The excellent drawings by Peter Morgenbrodt are the best I have seen in this kind of book, somewhat along the lines of the previous work *Phantastische Drachenwelt* (also illustrated by Morgenbrodt.) The resulting kite plans are extremely clear and detailed, and the use of color sets a new standard for technical kite drawings.

Beyond its good looks, the book benefits from more essential aspects, foremost being the fact that this time all the kite designs

seem to be by the author himself. Paradoxically, Schimmelpfennig doesn't bother to credit himself much—the reader might think that these designs are just hanging from the mythical tree-of-kites, ready to be picked by anybody as if they were in the public domain.

The choice of kites is good: six stunters and three one-liners—the latter not particularly innovative, yet interesting and well-treated. The selection of steerable delta wings is especially interesting. We see variations in shape, bridling, and elements such as the small tail rudder of the Scanner. The stunt kite chapter ends with the Paradox, a tridimensional quad-liner.

Materials and building techniques are concisely described. Good items include a short paragraph on sewing techniques and one on fine tuning of stunt kites.

But perhaps the most interesting items are the first two chapters. They are a breakthrough in comparison to the trite introductions of most contemporary kite books.

The first one, "Drachen im Wandel der Zeit" ("Kites in the Course of Time") is a refreshing alternative to those deadly abbreviated "histories" of kites. It sums up and concentrates on the major developments in Western kite design, and it only suffers from its shortness (about one page of text) that inevitably leads to a superficial treatment. There is one curious, big mistake, the date of the invention of the Flexifoil given as 1992 (it was 1976)—an obvious oversight which

doesn't affect the overall contents.

In the second chapter, titled "Drachen Kreativ Gestalten" ("Creative Kite Design"), the author attempts a short but comprehensive theory encompassing colors, effect of color, color and form, shape creation, three dimensions on a surface, and hints for design of sails. While appreciating this effort, I feel it is far too compressed and simplified. It will take much more for each aspiring kite artist than to just follow this condensed set of general rules, although they will possibly benefit some neophytes who have just discovered kites and need a starting point.

Neither Schimmelpfennig nor the kite literature in general has yet produced a real, in-depth study of *modern* kite history or aesthetics. Neither one would be an easy task. But what a fascinating goal to attain, to show kites fully, suspended as they are between their inherent grass-roots essence and their full right to be considered, by now, a significant and unique form of art.

—M.A.

Is 182 Pages Enough?

Kite Precision: Your Comprehensive Guide for Flying Controllable Kites by Ron Reich (Ramona, California: Tutor Text, 1994), softcover, 182 pages, \$14.95.

Kite Precision is the first written effort of longtime stunt kite master Ron Reich. Since the early days of the sport, Ron has been known for innovation and a willingness to share openly his knowledge and experience.

Kite Precision offers good information, but it could have been organized and presented better. For example, controlling multiple kites is followed by a section on selecting a kite! If you're flying two or more kites, wouldn't you already have selected your kites? There are many low-resolution photographs which, while clearly illustrating their points, detract from professionalism for which the book might have been striving. Many common desktop publishing mistakes are evident, but we can forgive this somewhat because the content is good.

Flying techniques are described throughout the book in simple to understand yet very clear detail. Basic topics include kite parts, setting up, posture, safety, various launches and landings, turns and speed control. The author addresses all the flying

techniques needed to become a basically proficient flier. Well-detailed explanations of individual tricks, such as turtle launches, tip drags and "dog stake" flying give any flier something to practice.

The sections on flying the Revolution and Flexifoil kites give excellent descriptions of beginner-to-advanced techniques. Ron's expertise with all kinds of stunt kites is conveyed as he presents this information, while maintaining enough enthusiasm to interest fliers at all levels of experience. This can also be said of his coverage of team flying. He includes such topics as how to get started, basic-to-complicated maneuvers, building a routine and fun things such as two people flying one kite.

As would be expected, Ron's introduction to team flying is first rate. He describes a logical system for classifying team maneuvers by type and degree of difficulty, and gives good examples. A noteworthy section, but all too short.

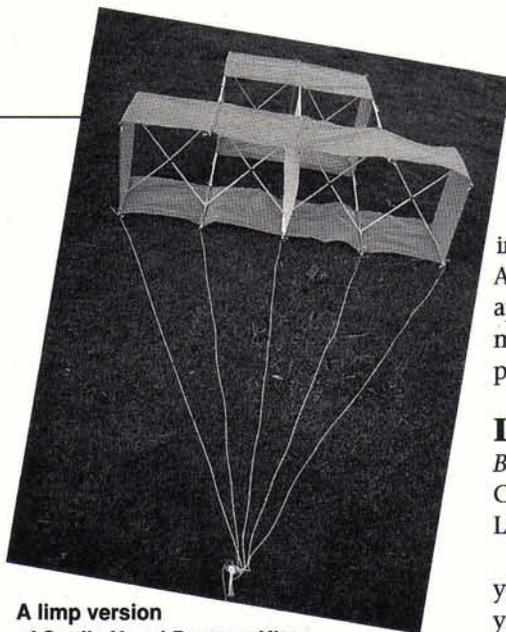
The last section in this book remains incomplete. The introduction to team choreography follows in natural progression after the basics. Ron gives enough information for you to work out a routine, but, as he himself states in the book, there is a lot more you need to know to produce a new and polished performance. He's already working on his next book to give us the rest of the details. Maybe his future writings will also include information about the kite community and its events, in which his talents thrived.

I was a bit disappointed to find *Kite Precision* explaining basics that are already available elsewhere, especially when Ron can offer unrivaled depth on the more advanced topics. However, mastering all the techniques Ron presents will certainly give any flier a solid foundation in the sport. This is a book in which every stunt flier, whether beginner or advanced, will find something of value. —J.A.

Sincerest Form of Flattery

Making Kites by Rhoda Baker & Miles Denyer (Secaucus, New Jersey: Chartwell Books, 1993), hardcover, 80 pages, \$12.98.

It's a new book—but you have seen it already! The chapters "Flying a Single-line Kite" and "Flying a Dual-line Stunt kite" are literally copied from the pictures con-



A limp version of Saul's Naval Barrage Kite from *Box Kites* by Bill Cochrane.

tained in *The Ultimate Book of Kites* by Paul and Helene Morgan—even the colors of the trousers, of the jacket and hair of the woman are the same! The end papers, too, are an obvious swipe, using a repeat pattern of kites (diamonds instead of deltas, but what's the difference?)

The introductory pages portray George Peters's kites—without recognition of the maker. How many times have we seen these very same kites in recent kite books? Similarly, an uncredited Peter Malinski parafoil marks the upper right corner of each page. None of the projects show how to make these kites.

What's most disappointing is the poor content of the book. There are a few interesting ideas here and there: look at the shape and bridling of the Delta Stunter or, on a more modest scale, the Delta Bird. But no appendix is included to provide entry to the larger world of kites.

The plans, a mixed bag of things seen plentifully elsewhere, unfold in no logical or sequential order, for example by models, materials or degrees of difficulty in building. Our favorite is the Eddy Train: a train made of four kites decorated by that old technique of sponge painting and built using that other old technique of "soaking the four cross-spars underwater for about two hours to make them flexible"—isn't all this revolutionary in 1994?

It is sad to see a book like this so attractively packaged—with good photographs, layout and printing—around such weak content. An average reader knowing nothing about kites might buy this without see-

ing its shortcomings. It was produced by an American discount book publisher with the apparent intention of hitting the bargain market. Most thoughtful kites will not be part of this market. —M.A.

Light as a Winerack

Box Kites Making and Flying by Dr. Bill Cochrane (London, England: B.T. Batsford Limited, 1993), hardcover, 96 pages, \$34.95.

This book puts to rest the old adage that you can't tell a book by its cover. This one, you can. Right on the cover is an unappealing box kite, braced with extra-thick wooden spars and a slack two-leg bridle. The kite obviously wasn't flying at the time somebody tossed it in the air to take a quick photograph.

The cover picture is a trademark of the style and content of the whole work. The kites pictured consistently show slack sails, in some cases bordering on the ridiculous: look at the limp Saul's Naval Barrage.

From time to time a nicer kite shows up, like the uncredited Prof. Waldorf Tetrahedral Kite on page 41—but when credit is given, as on page 11, the maker becomes Peter Waldren (for Waldron) and the brand Professor Waldorf. Joseph Lecornu's kites are not mentioned at all in the chapter titled "The History of the Box Kite," but one of his kites lurks somewhere under the novel but not very scholarly title of "Winerack Kite."

As a whole, the work is a hodgepodge of opposites, struggling between the high-tech image of its superficially pleasing layout and the pictures of crude-looking kites, crafted using old-fashioned building systems.

Dr. Cochrane's *Box Kites* seems to have a bit of everything but not enough of anything, as in its skinny list of books for further reading, and the emaciated "useful addresses"—not much indeed for the overweight cover price. —M.A.

For the Children

Four Crazy Kites to make and fly by David Pelham (New York: Dutton, 1994), softcover, 32 pages, \$6.99. (Publication in May.)

David Pelham's classic 1976 (and still in print) *Penguin Book of Kites* boosted enthusiasm for kites to a new adult level that continues to grow. Many kites can measure

Continued on page 23 . . .



WHEN KITING MEETS SAILING

Among all the kites made for traction over the past few years, have any been specifically designed for use over water?

ARTICLE
BY
PIERRE FABRE

PHOTOGRAPHS
BY
BRUNO
LEGAIGNOUX

Bruno and Dominique Legaignoux, two young French sailors and inventors, have come up with a safe and reliable sailing kite, very easy to relaunch without assistance even after it has fallen in the water.

Since their first prototypes, which were actually developed for waterskiing and reached the size of 20 square meters (about 215 square feet), nine years of quiet research and development elapsed. It was only last summer that the Legaignoux brothers began production. They are now looking for partner companies to help in distribution on a larger scale.

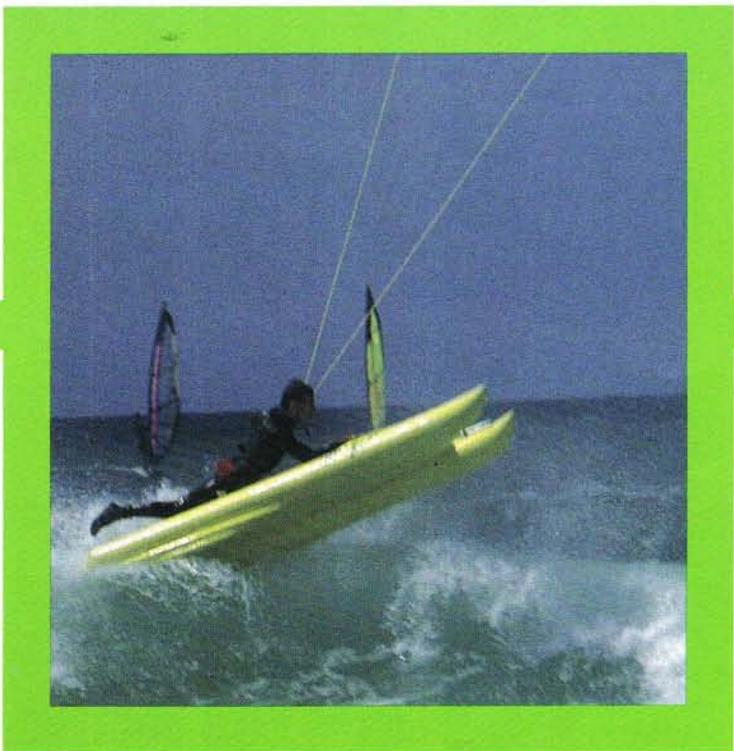
Although it can suit other boats and already has been adopted by dozens of kayakers, this innovative kite is normally meant to be used with a 3.2-meter-long (10½-foot-long) inflatable catamaran purposely designed by the two brothers. This kite-propelled catamaran known as "WIPI-CAT" (WInd Propelled Inflatable CATamaran) has all the features to make it a popu-

lar new beach sport. It is easy to handle and it is extremely safe for the user as well as for nearby swimmers because neither the boat nor the kite can sink or hurt thanks to their inflatable structures. Furthermore, the boat, the kite and all their accessories can fit into a small bag, 60 x 32 x 32 cm, (about 2 ft x 13 in. x 13 in.) for transport, the total weighing no more than 10kg (about 22 lbs).

The kite itself is interesting in design because of its unique (and patented) features. Surprisingly, the Legaignoux brothers have had very few contacts with the kite community. They come from a sailing background—both of them were French junior champions in the '70s. This may explain why their kite is so innovative, and escapes the influence of other already marketed designs.

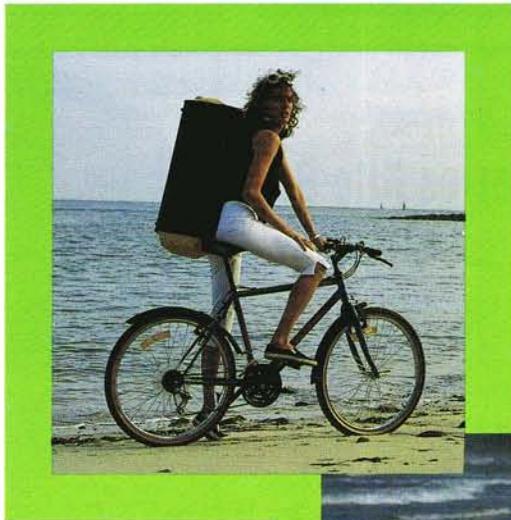
The six-square-meter (about 65-square-foot) single-layer sail is made from light laminated polyester ripstop cloth and its shape maintained by six custom-made inflatable ribs: a long one of arch form along the leading edge, and five others which give shape to the profile. They are made of a special (secret) light and elastic material and slid inside cloth sleeves. You just blow them up, put the valves back in place and the

The WIPICAT system applies not only to catamarans (as seen on cover) but to sea kayaks, opposite. Applications on sand, ice and snow are also being explored. This page, right, paired hulls shoot high at take-off. The inflated frame and shape of the wing permit relaunching from water.



kite is ready. It will not sink nor fill up with water like other wind-inflated wings. In case of a puncture, which is very unlikely to happen on water, the kite can still fly with one or even two ribs deflated. The ribs are easy to repair or replace.

Seen from the front, the kite has a half circle shape. One immediately notices the absence of any complex bridling; only two fairly short (six-meter [about 20-foot]) polypropylene lines, which float on water, come from each end of the arch and are attached with a safe quick-release system to the harness of the pilot, who doesn't have to bear the pull through his arms.



Directional control of the kite is achieved by pulling on the small knobs attached at the ends of two smaller lines, running through the main ones, coming out just one foot (about 30 cm) before the kite and attached a little higher to its leading edge. Pulling the right knob will lean the kite to the left, and vice versa. (The controls are the

“opposite” of what they are on regular stunt kites.) In light winds, pulling both knobs will give an extra kick to the kite. Of course, the WIPICAT system is not meant for acrobatics in the sky. The kite is designed in such a way that it can be steered with only one hand.

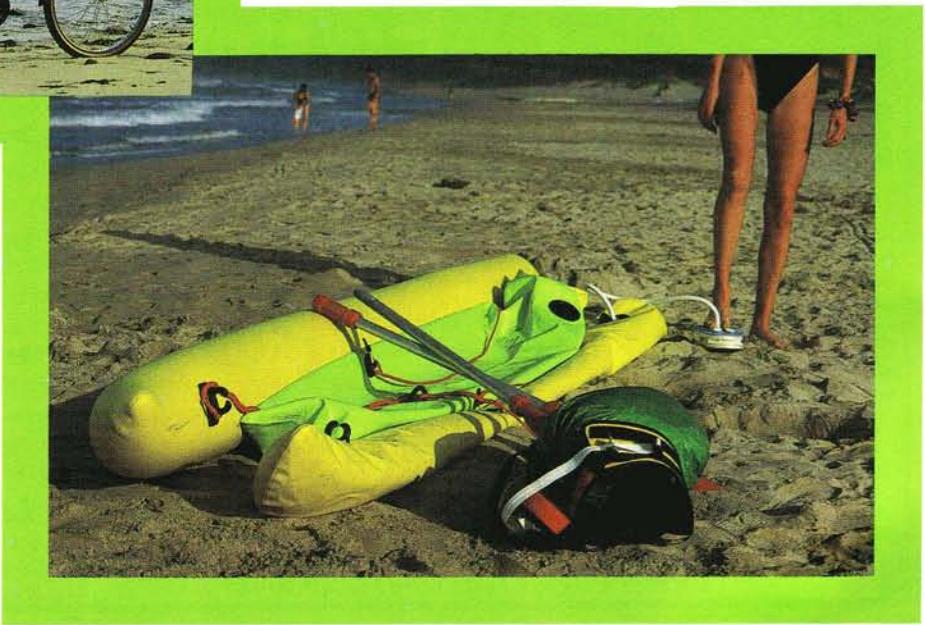
These features along with the ability to move the towing point relative to the

boat provide full directional control: turns on the spot, quick stops, reverse drives, and windward courses up to 60°. When it falls on the water, the kite tumbles, pushed by the wind, and soon gets into the proper position for a relaunch. Windspeeds over Force 2 to 3 (4 to 12 mph) are required to make this maneuver possible.

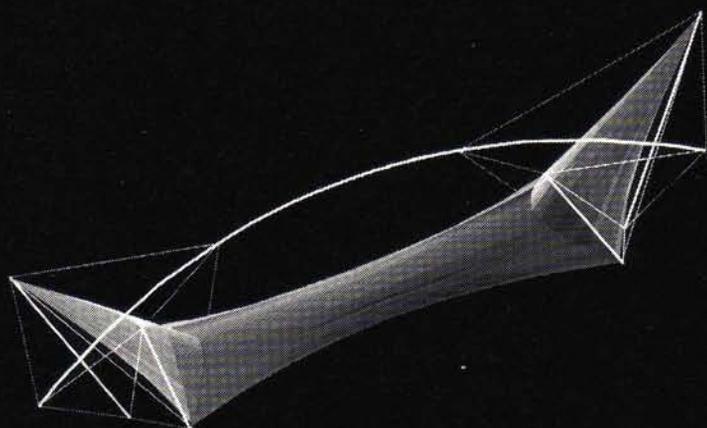
Through the many tests they did, the Legaignoux brothers have reached speeds of 15 knots (17mph) with their catamaran.

Many other uses of this kite are soon to be explored, particularly in the field of sailing safety. Perhaps this unsinkable kite could become a regular feature on every lifeboat. ◇

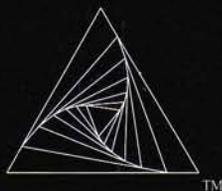
Inflation and transport of the WIPICAT system is streamlined: Right, the wing waits in the green bag while the catamaran undergoes inflation. Inset, all the equipment in the bag weighs only 10 kilos (22 lbs).



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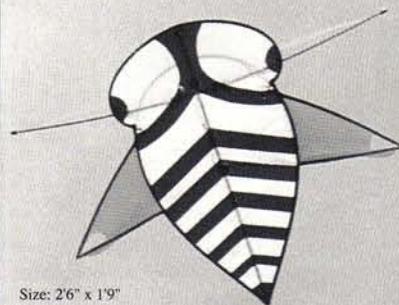


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their reverence for Pelham by the number of copies they have worn out and replaced.

For kites, therefore, anything Pelham does is important. However, since *The Penguin Book*, Pelham has designed kite books rather than written them. He has created paper kites that are printed in books (or book-like portfolios), then cut out, glued together and flown. These artful, charming productions offer singular fun and results that fly, even though the sail loadings (weight-to-lifting area ratios) are usually less than ideal. This book is Pelham's third of this kind (after *Kites to Make and Fly* in 1982 and *Fly Kites* in 1990). All are dressed in bright, happy colors and accompanied by friendly, systematic instructions. Measurements are thoughtfully given in both metric and U.S. Each book has included a reel that you cut, fold and glue together from the paperback cover—very clever!

Four Crazy Kites is like Pelham's other kite books except this time the kites are sleds, identical in construction but each with a different "Crazy" Picasso-style face. Although *The Penguin Book* is still the place for a real creative charge, this little book makes a good introduction to kites, especially for children.

Step-by-Step Making Kites by David Michael (New York: Kingfisher Books, 1993), soft-cover, 40 pages, \$5.95.

This book might be compared to *The Usborne Book of Kites* by Susan Mayes because it is similar in format and audience and the price is the very same. However, on close examination, these two books are quite unlike. The essential difference is that *The Usborne Book* honestly tries and comes very close to being a book that children really can use independently. *Step-by-Step Making Kites* just flubs it.

For example, it suggests carbon fiber spars, ripstop and other high-tech materials without making any suggestions for obtaining them—as if they were in every local K-Mart. Also, amazingly, it suggests stitching nylon *by hand with needle and thread*. Maybe sewing machines are a bit dangerous for children, but it seems to me this solution goes too far!—especially when the photographs show kites that obviously were machine sewn.

This book contains nine kites and three spinners, but the desire for quantity seems to have overtaken quality: the instructions are sketchy throughout. Once again, the layout and printing (mixing photographs and illustration) are competent enough. It's the content that lets us down. We can handle that as adults, but for children it shouldn't happen. —V.G.

Book News & Forecasts

Coming Soon . . .

Recumbent bicycle expert Nop Velthuizen and his friends Servaas van der Horst and Jan Pit have another book in the works, *Stunt Kites II: New designs, buggies and boats*. (Yea! buggy plans!) Out in Dutch, German and English in June, they say . . . America's most prolific kite book author, Wayne Hosking, has three works scheduled for publication this year. The first, *Kites for Kids*, is in the pipeline as we go to press, a "simpler" book, we're told, and only \$8.95 . . . Speaking of Wayne, his 1992 coffee table book, *Kites*, has just come out in paperback form at a new lower price, \$11.95. Not a great reduction from the original hardback's \$15.95, and the scant updating of the appendixes leaves most errors and omissions wholly intact—but both front and back covers are entirely new (and better) . . . Dave Gomberg's *Stunt Kites!*, which first burst on the scene in the bygone days of 1988, will be published in April with a new cover and a new price, \$11.95. Contents, revised extensively last year, will be further updated.

And Still to Come . . .

Tal Streeter's book, *A Kite Journey Through India*, is finally completely written. Of course, the publisher, Weatherhill, still has work to do on it, so it won't be out until Christmas of this year. (Authors often postpone books, but publishers are another breed—and this has to be the longest postponement of a kite book ever by a publisher.) Says the author, "It will be a *thick* book—more than you ever wanted to know about India's kites!" . . . Another book already from Richard Synergy? Yes, in June. Title: *Kiting to Record Altitudes*. Half is the story of setting the single-kite Canadian altitude record and half is data, tables and details telling how you, too, can hit the heights. —V.G.

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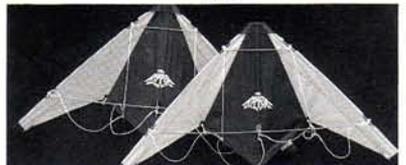
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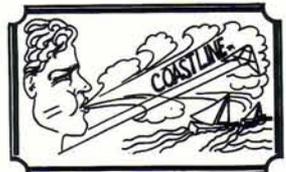


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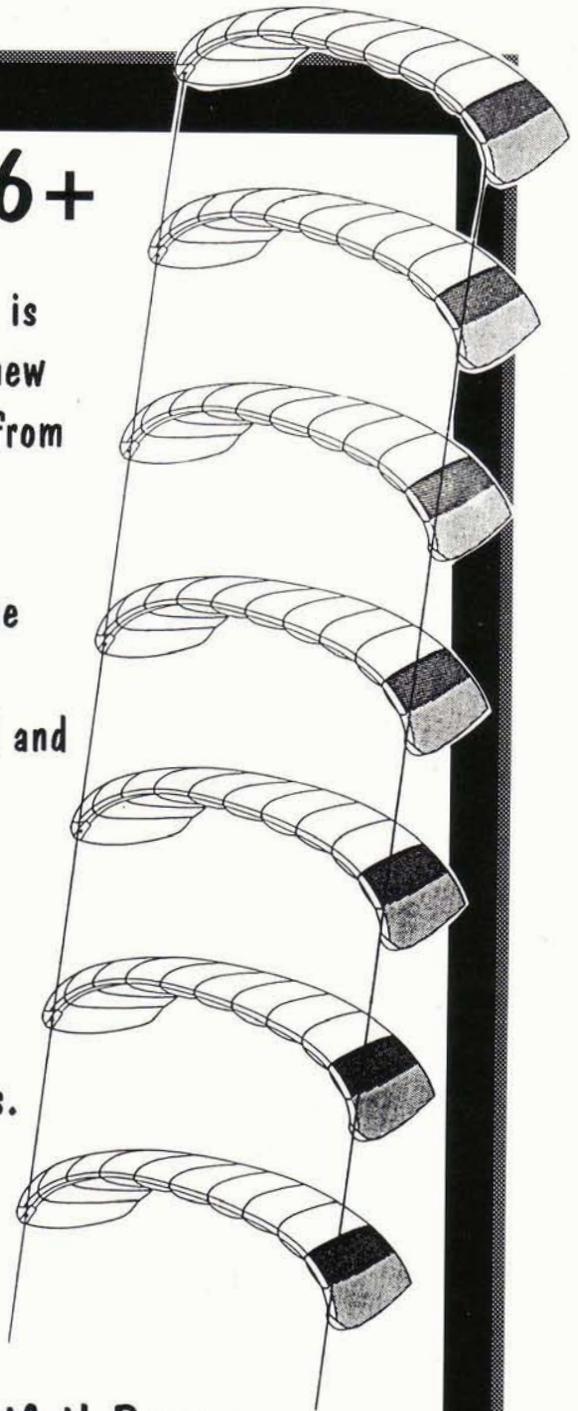
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* NOTE:

Although this kite has been designed primarily for bugging its features make it an excellent all round sport kite flown on its own or stacked.

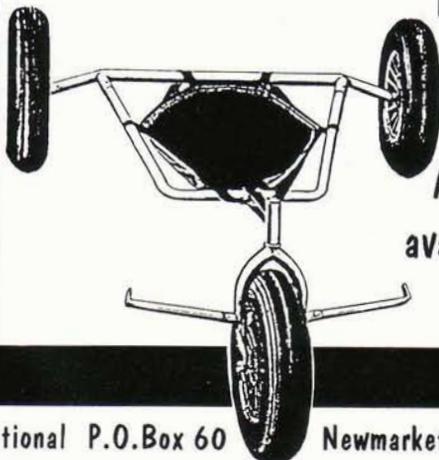


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Article & Photographs by Mel Govig



Kites fly against the dramatic backdrop of Volador in Medellín, Colombia.



This is yaripa (below). Only 40 feet off the highway and deep in the jungle, Jairo Montoya and Don Eccleston find it.

Typical canes harvested are half-inch diameter, from seven to 10 feet long, clear, tapered and light as a feather.



Kites of screen-printed cotton are framed with yaripa.

Where on earth am I? The kites are 50 feet off the ground as I look down on them floating 100 feet below me, bold against the hillsides and the city. What is this beautiful place? Medellín! That's right, Medellín, Colombia, South America.

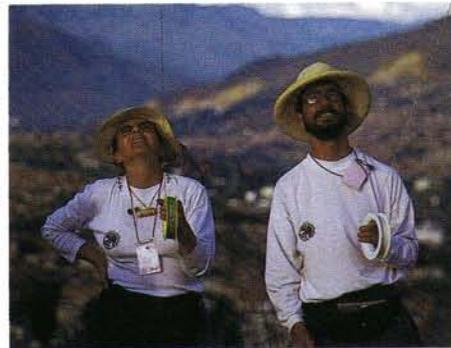
For years, U.S. television has imposed on us a distorted view of this country as being rife with drugs and chaos. I had met Inès Elvira Uribe and other members of the Yaripa group in Thailand two years earlier. Her charm, somewhere between Peter Pan and Mother Teresa, made me determined to see the country for myself.

The first week in December was to be Colombia's first international kite festival, and Inès and her husband Jairo Montoya had managed to get kiteflying included in a huge two-day air show at the Medellín in-town airport. The city's altitude of 6,000 feet and its position just above the equator make the sun burn hot and bright, and cool breezes are deceiving. But we didn't notice at the air show, with its amazing crowds, in the tens of thousands. The show, complete with hang gliders, sail planes, ultralights, parachutists and modelers was a great foundation for a week-long series of activities for visiting kitefliers. Though foreign participants were few (four from the United States and two from England), the affair was well attended—many kites came from Bogotá and elsewhere in Colombia.

The five days following the air show were packed with activity as we toured the area on a people-to-people excursion. Everywhere we went it was children at our elbows, parents smiling beside. We learned that this was a usual pattern of kiting in Colombia—making and flying kites with children and families—and it was very much in keeping with the spirit of "Yaripa."

And what is yaripa? Yaripa is a strong native reed with a pithy core which makes excellent kite spars. Comparable to synthetics in lightness, it is completely renewable and biodegradable. I weighed some yaripa that I brought back from Colombia and calculated that 16 yards of it weighing eight ounces (with a diameter of approximately 3/8") is right at a half-ounce per yard.

Yaripa is also a spirit. As Inès says, "Our group is dedicated to protecting the environment. We try to focus attention on the air around us through kiteflying." It was Inès and Jairo who founded the unique kite club Yaripa-Asociación Ecológica de Cometeros del Volador in 1988. The group was named for the yaripa cane and Volador, the group's favorite flying site, one of the mountains within the city of Medellín. Yaripa is set apart from other kite clubs in Colombia by its concentration on traditional kites made from native materials and its use of the craft to combat the influences of drugs and crime on the young people of the region. →



Inès and Jairo look up.



Kites rise in flocks from the streets of the Barrio Picacho in Medellín.

We visited Volador, a saddleback ridge rising about 1,000 feet above the surrounding city. To show how seriously the Yaripa group takes its ecological commitment, the first thing each of us did on our arrival was to plant a tree. (Now I ask you, how many kite clubs plant trees on their favorite flying site?) After the planting, 40 or 50 of the Colombian kitefliers rapidly launched their trademark six-sided, long-tailed kites as well as classic designs—boxes, Conynes, deltas. We visitors joined them to fill the sky.

Our ever-present, ever-pleasant guides and interpreters, Anita Jaramillo and Blanca Stella Montoya, helped us to talk to the fliers on the field, such as José Ernesto Palacio A. of Medellín, who said,

“You have so many kite materials. We in Colombia need information about them. Even though we have cotton, paper and yaripa, it is not enough.” Odd but true that in a fabric-producing society (textiles are second only to coffee as exports), the kites still crave what they don’t have: ripstop, connectors, composite spars.

But the kites make the most of what they have. I saw complex box kites made by

German (pronounced Her-monn) A. Serrano Gomez of Medellín and Dr. Raúl Motta of Bogotá using Tyvek®. One surface was roller-painted a bright color. In the air, the effect of the contrasting white surfaces to the painted ones was riveting. The bones of these kites were yaripa.



Above, German Serrano Gomez and his Tyvek box kite. Right, Butter-fighter by Joel Scholz flies at Medellín's airport. (Note the three airplanes flying nearby.)

A highlight of the week was our trip to El Peñol (locally referred to as “the largest rock in the world”) where most of our party climbed the 500-or-so feet to the top and flew kites. Afterwards, we stopped for several hours in the village of Guatapé while our bus driver repaired a flat tire.

This happy interruption let us enjoy an excellent meal of fresh bass from the lake. We then admired the waterside kiteflying of Joel Scholz with his Butterfighter and Jon Trennepohl with his Ultralite stunter. Don Eccleston and Derek Kuhn of the Midlands Kite Fliers in England always had something to fly whatever the winds.

A stop on our itinerary was the Picacho Barrio (barrio is neighborhood in Spanish) where we made and flew nearly 500 plastic sled kites with the local children. The kitemaking was accomplished without tables or chairs; circles of kids and volunteers sat cross-legged in the streets. At this and other stops, U.S. kitemaker Jane Parker Ambrose, founder of One Sky One World (OSOW), delighted the children with her menagerie of animal windsocks.

Most of the visitors from Bogotá and the U.S. left for home before the end of the week, leaving an item of unfinished business to those of us remaining. That was to fly OSOW's TKTWFATW (The Kite That Will Fly Around The World). This 50-square-foot parafoil is on an extended journey to kite festivals in many countries. At each location, a banner signed by supporters is attached to the kite and flown.

Hoping to fly the kite and its Yaripa banner made specially for the occasion, we went back to the saddleback at Volador. I furnished the camera and flying line, Don Eccleston supervised the launch and Derek Kuhn directed the hauling crew to fly the kite, to the applause of the spectators.

Our hosts took great pains to see that we felt secure and watched over. In reality, the streets of Medellín seemed to me less threatening than most other cities of over a million people. I spent a few hours by myself wandering streets filled with hardware stores, grocers and florists. I shopped and walked and at no time did I fear for my safety. In Medellín, the traffic is moderate, the streets clean, the buildings modern, the open air bars and restaurants delightful,



the scenery beautiful and the population a harmonious mixture of fun-loving, family-oriented people.

A ride through the mountains with German and his family offered me a glimpse of family life in Colombia. He and his wife, both professionals, stopped at a playground and pizzeria to give their children a chance to play in the cool mountain dusk. While in the mountains, I noted at least five varieties of bamboo—3" to 6" in diameter, some of it with very thick walls, and as tall as 50 feet. The yaripa users seemed surprised at my interest in bamboo. German said, "But it's too big and heavy for kites!"

I remember the flowers, the fruit, the mountains, the lakes, the people. I remember young Juan Camilo Blandon who was an almost constant fixture at our various kite-flying locations. More than once, Juan saved Joel's butterflies from disaster and became Joel's righthand man. I remember Señora Motta salving my sunburn. I remember the late nights with friends at the Black Cat cafe and returning to the compound after curfew. I remember coffee that was more



Signatures fly for One Sky One World.

milk than coffee in a country famous for its coffee.

A second festival on a theme of flowers is planned from July 30 to August 7 this year. The Yaripa association is particularly interested in having kitemakers assist them in a series of workshops and exhibitions. If you have the opportunity to attend, you will experience the sense of total submersion in the culture and the kiteflying community that we all felt on this trip. Unlike other festivals, where you might feel like part of the hired entertainment, in Medellin you will feel like part of the family.

I returned to Maryland with a t-shirt that proclaims "Medellin, we can be great again." I believe they will. Perhaps they already are. ◇

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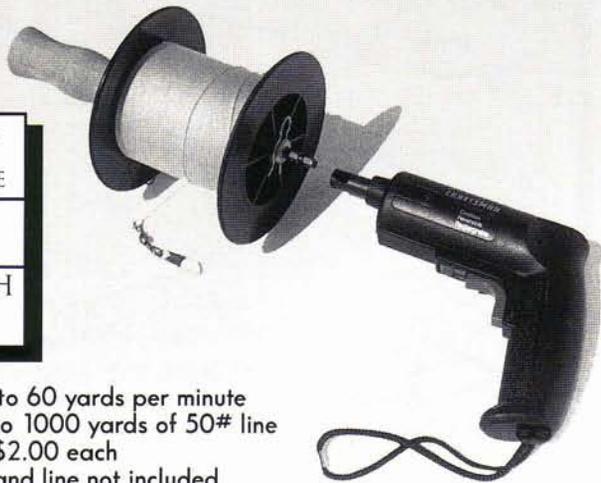
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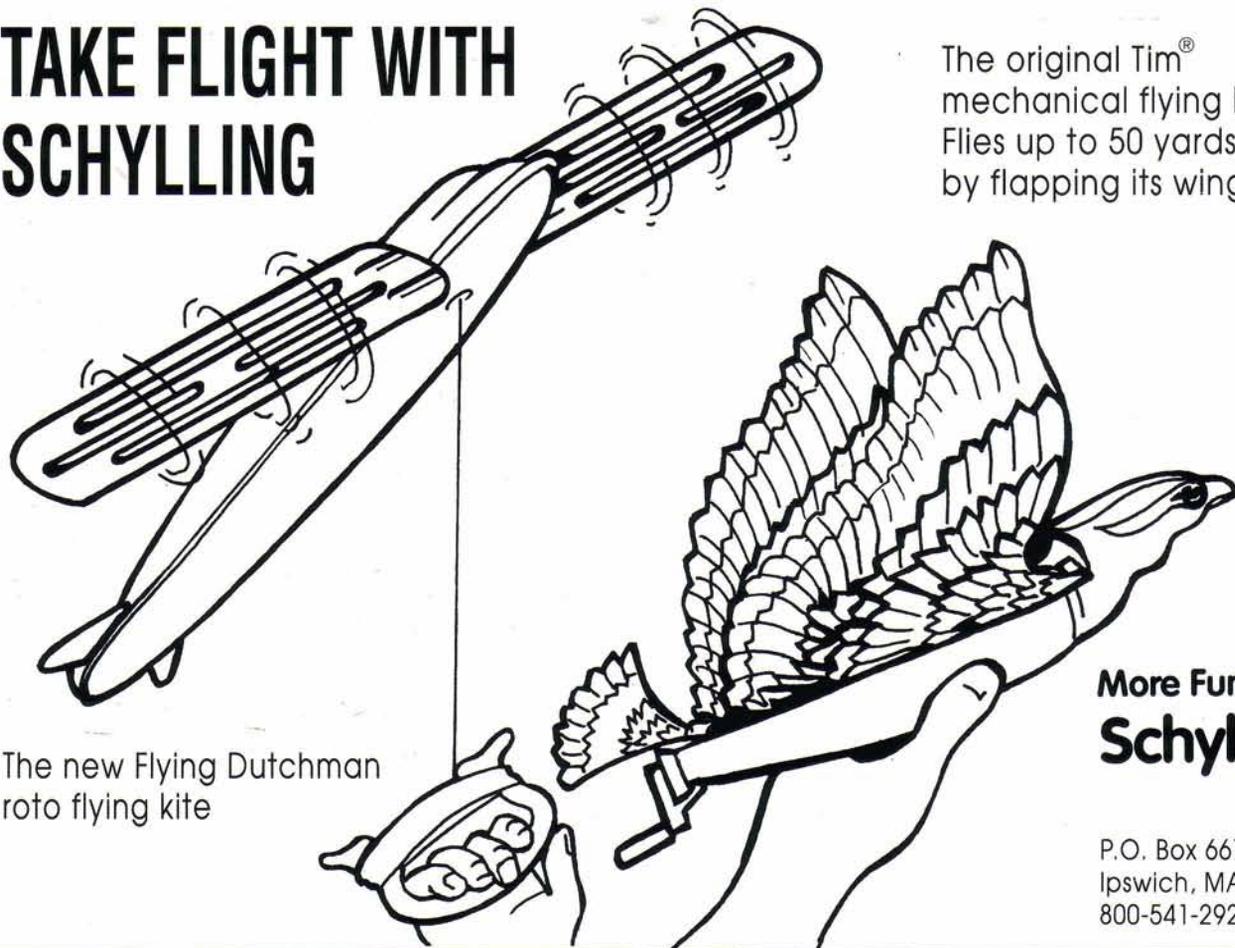
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To Adjust Your Bow Lines

1 Handsome Bead Sliders Are Snug & Tidy

From Ron Gibian, Visalia, California:

Here's an attractive friction slider for tensioning your kite line or bow string. Using a 1½" plastic "bone pipe" bead from Tandy Leather, I drilled additional holes in the bead, perpendicular to the axis, ¼" from each end.

Then the bow string is threaded through the bead as shown, with the running line passing out through one hole and back through the other, emerging at each end. This creates the friction bends that secure the slider's position on the line. The beads come in several colors so I can match them to my creation.



"BONE PIPE" BEAD SLIDER

2 Other Ways: Buttons & Bow(strings)

From Mel Govig, Randallstown, Maryland:

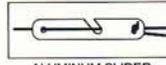
I have found that the popular aluminum

friction sliders tend to fray and blacken the line, so the use of less abrasive slid-

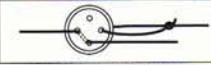
ers is a good idea. I found the bead slider (left) to produce less line friction than other tensioners, which would argue for its use in some applications but against it in others.

I've seen several alternatives used by fellow kites. A few ways are illustrated here. Probably the simplest is a large button having four holes or a small piece of wood or heavy plastic drilled in three places.

The most effective slider I have seen is a drilled wooden dowel section as used by Frits Jansma of The Netherlands and others. The extra thickness of the dowel relative to that of the line assures four clean right angle bends. The dowels can be painted or stained to your taste.



ALUMINUM SLIDER



SIMPLE BUTTON SLIDER



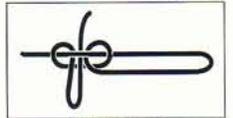
DRILLED PLASTIC SLIDER



DRILLED DOWEL SLIDER

For some uses, I prefer a slippery double half hitch, "slippery" because the knot is completed with a loop which can be pulled out to release the tension. It is also a good knot for attaching bridles to kites.

The principle of any of the sliders is the same: by putting a tight bend in the taut line, you cause friction, to prevent the tensioner from sliding. But, because the line is not knotted, its position can be easily moved. Generally, the longer the slider, the more effective it is. (None of these work well with Spectra line—it's too slippery.)



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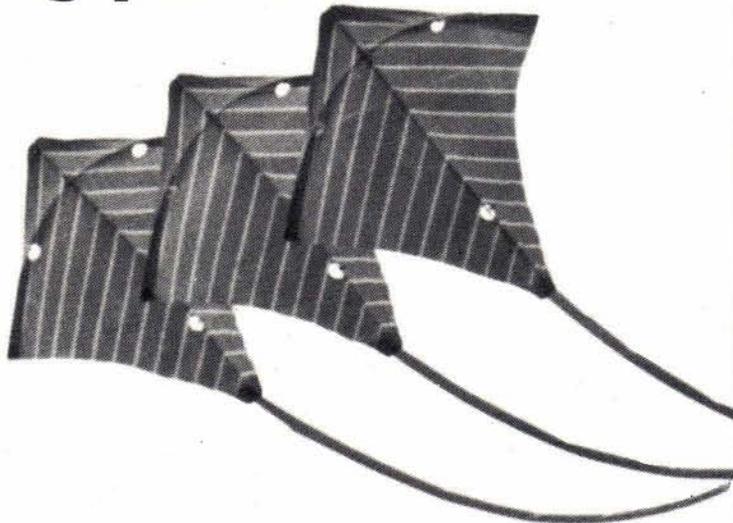
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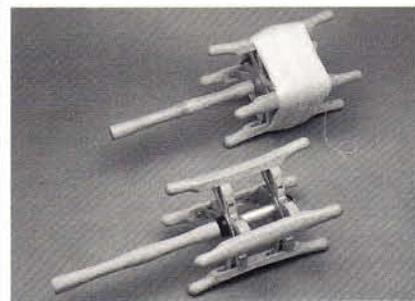
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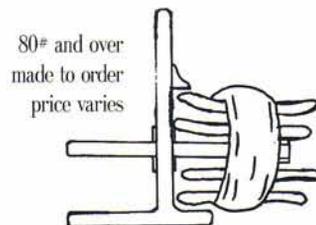
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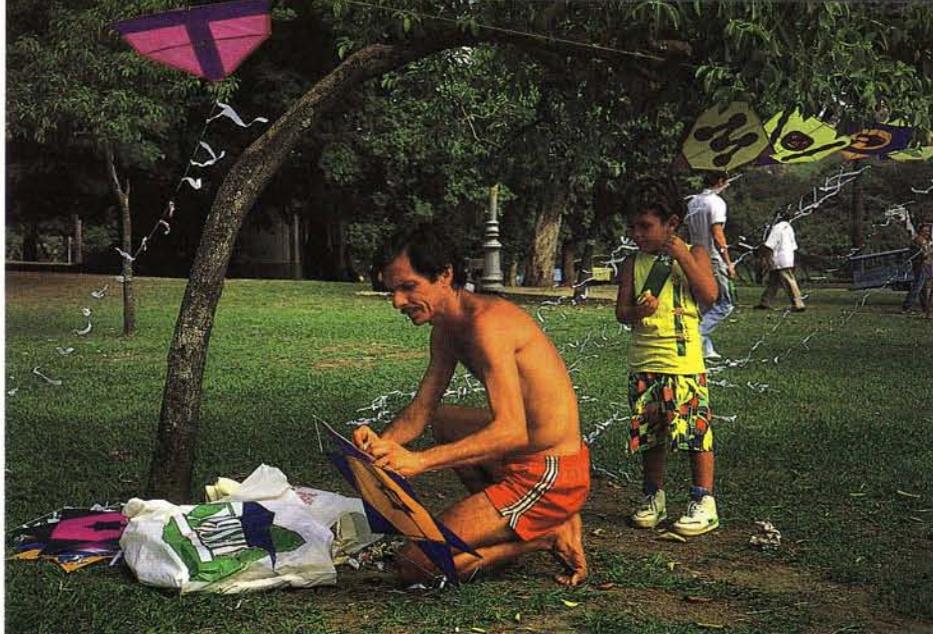
KITES IN SOUTH AMERICA



pipas do BRASIL



Article & Photographs by Pierre Fabre



A kite merchant displays his colorful pipas at the National Museum Park in Rio.



For years the kites of South America have been veiled in mystery. Only inklings have trickled out to show the rest of the world the exuberant array of kite forms and activity existing on this large continent.

Now in Colombia (with Mel Govig, page 25) and in Brazil (with Pierre Fabre, following) we begin to see more. These new observations allow us to expand our world view of kites and, as always in so doing, our rapport with the family of man.

Remember June 1992?... Rio de Janeiro became for a while the center of the world. An unprecedented number of heads of government gathered there, trying to come to some agreement on the fate of the earth threatened by decades of blind industrial growth.

I was lucky to be sent to Brazil by a nongovernmental organization which chose to attract the media with a hot-air balloon accompanied by hundreds of kites decorated with the flags of the United Nations.

In São Paulo I joined a local kite expert and friend, Silvio Voce, and there with his team we constructed all the kites before leaving for Rio to fly them during the opening ceremony of the Global Forum.

Brazil is a huge country (larger than the continental U.S.A.) divided into 24 states. During my stay, I visited only the two major cities.

Rio de Janeiro

There are thousands of kitemakers in this huge city, but only a few come to the central area because most kitefliers live in the suburbs or the *favelas* (poor sections on the steep hills in Rio). Yet the flow of tourists to the beaches and the National Museum attracts some kite peddlers.

Although they all claim they make the kites themselves, it is obvious many are only sellers who buy their merchandise from the numerous small manufacturers

who mass-produce low-quality kites. Real kitemakers are easy to recognize because they usually sell their own specific designs, which are not printed, and mark them with

their *carimbo*, a rubber stamp engraved with their brand name. These brand names always include the word *pipas* (kites) which makes it appear to be the family name of all kitemakers!—Flavio Pipas, Chico Pipas, Max Pipas... Except for the most active of these professionals, many seem to have another job. Kites are only a seasonal business which generally doesn't pay enough to feed an entire family.



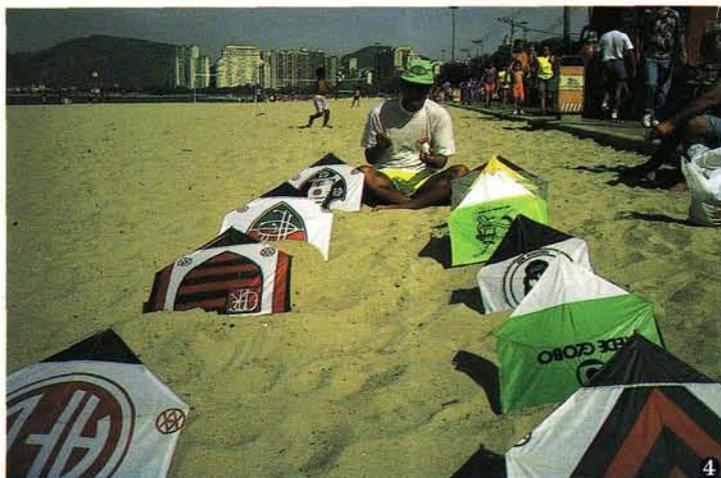
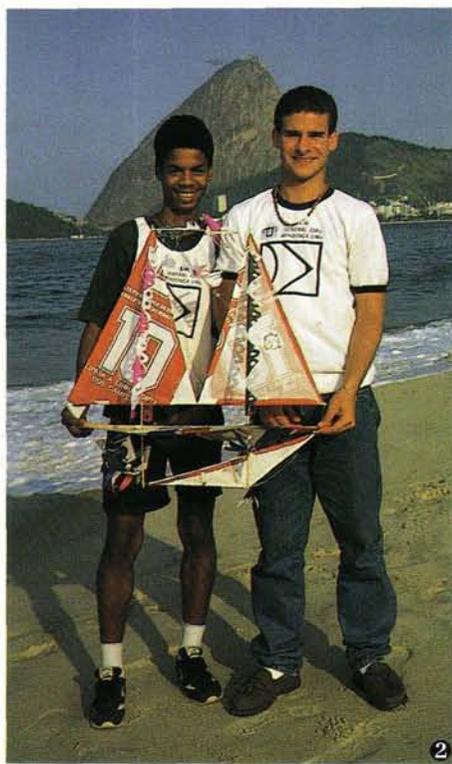
Chico flies his *cordão de pipas* or *gambiarra* (train of kites) at Copacabana beach, Rio de Janeiro.

ALONG THE BEACHES

Sunday on Copacabana beach, Francisco de Assis da Costa, alias Chico Pipas, was showing his fighters for sale all flying from a single line, as a train or *cordão de pipas*. It was fairly easy to spot him

from a distance and I was relieved to find at least one kitemaker there, for I had been walking in the heat for at least five miles without a kite in sight..

Chico's fighter kites, called *pioes* here in Rio, were extremely well crafted, with a minimum of overlapping where different colored papers are joined together. Also their tails had many more and finer strips attached. Obviously, the man was skilled and liked his work, spending on each kite probably thrice the time it would take to make an average kite. Chico was 36 years old



KITE LIFE IN RIO:

1. Kitemaker selling his octagonal kite on Flamengo beach.
2. A barco (boat) kite on Flamengo beach.
3. Kite seller with cloth aguia (eagle) kite. Papagaio (parrot) versions are also typical.
4. In the sand, fighter kites for sale on Flamengo beach.

and was working until recently in a paper-making factory. Having lost his job and despite the criticism of his family members who now consider him to be a vagrant, he prefers to make a living selling his kites. Actually, he earns more money now, and he feels freer.

When I asked him why so few kitemakers come to sell their wares on the beaches, he explained that these are not the best places, because one shouldn't practice kite fighting there using dangerous cutting line. But Chico also admitted that, on weekends, many kite merchants go to Barra de Tijuca, a long and windy beach in the most remote southwestern part of the city, more than 15 miles from the center. It is the favorite bathing place of *cariocas* because the ocean there is not as polluted as it is in the bay.

Although the *pião* fighter is by far the

most common design, several other paper kites can be found for sale on the beaches—small squares, hexagons, octagons, stars and sometimes birds. I saw only one plastic model.

It was not until the last days of my stay that I found some cotton cloth bird kites or *papagaios* (parrots) which I previously thought to be the most prevalent kites in Rio. They are most often seen abroad, brought back by tourists or shown in kite books. This kite might have been common a couple of decades ago, but it is obvious that the *pião* has now taken over all other types. There are possibly still a few genuine makers of the famous traditional eagle kite, inspired by the splendid birds which soar around the Pão de Azucar, but those I saw were souvenir items, printed with a view of the Rio beaches.

MAGOO, THE MAGIC OF KITES

I decided to visit the home of a young kitemaker I had met on the beach: Samuel, 23 years old, the eldest of three brothers who recently started manufacturing fighting kites for a living under the brand name of Magoo Flavio Pipas (Flavio is the name of his younger brother). The short taxi drive I expected turned out to be an hour's journey through traffic jams to reach their flat in the northern outskirts of Rio. Yet I had no regrets because I received a most friendly welcome from the Terto Carneiro family.

The father, a former fireman now retired at the age of 50, as well as the mother help in the process of making kites. They have no real workshop, so the living room tables are used to cut and paste the paper sails, while freshly finished kites are hung to dry on hooks set all around the room. Marcello,



5



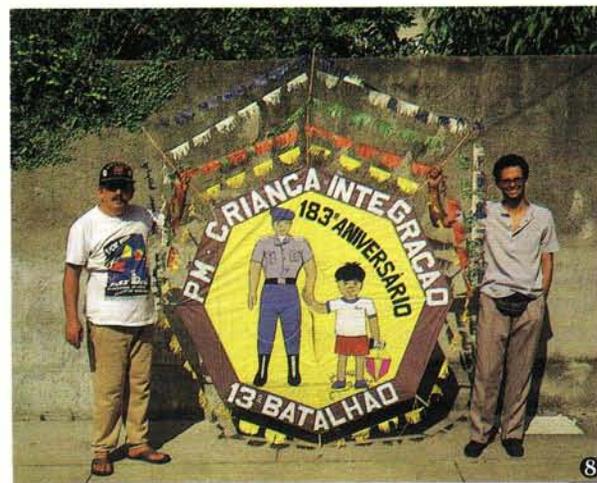
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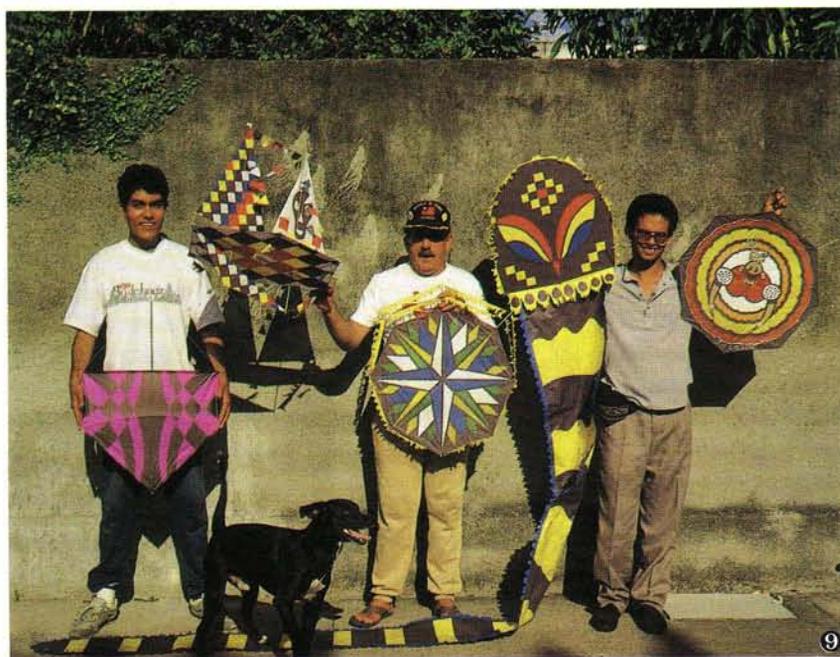
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THE TERTO CARNEIRO (MAGOO) HOME SHOP:
5. Samuel and his mother. 6. Marcello demonstrates how to trim taquara struts with a drawplate. 7. Terto Carneiro template for kite frames.

THE SHOP OF JOSÉ TEIXEIRA FRAGA (ZECA):
8. Zeca (left) and kitemaker friend Max show an octagonal kite of flecha structure with message of "understanding between police and children." 9. A variety of kites by Zeca are displayed by the maker (center) and friends Marcello (left) and Max (right).



8



9

22, showed me some drawings of the 80 different graphics he designed for the kites. The family produces an average of 50 fighter kites a day, which they realize is not very much when compared with other makers, but this pace probably allows for a better quality of kites. When I asked why they made the lower spar narrower and curved, Marcello explained that with this shape, the kite becomes much faster in attack. They indeed claim that their kites are the fastest in Rio! This variant of the regular *pião* bears the name of *carrapeta*.

ZECA, THE KING OF KITES

Marcello introduced me to José Teixeira Fraga, alias Zeca das Pipas, the kite star of Rio. A former furniture upholsterer and a bachelor now in his 50s, he has been deeply involved in kiting activities for the past 25

years and his adopted children are the thousands to whom he taught kitemaking.

When he was a child, Zeca used to fly not only kites but also paper hot-air balloons which could set devastating fires. Because kiteflying is far less dangerous, it became his main interest. Having won many awards in kite competitions all over Brazil in the '80s, he is now a professional kite media personality. Most of his time is spent leading workshops for thousands of children, organizing events and exhibits in many places around Brazil. Like Silvio in São Paulo, Zeca has media coverage and his work is also occasionally sponsored by officials who recognize kiting as a versatile and enriching activity for children.

I could feel a competition between him and Silvio because apparently they are the only two persons in Brazil to make a living

through sponsorship. The sponsor of Zeca, previously a food store chain, currently produces a cotton thread called Lipasa and is positioning itself to take part of the kite line market dominated by Linhas Corrente, which is none other than Silvio's major sponsor.

Zeca das Pipas, often called the "King of Kites" by his journalist friends, is nevertheless a most congenial character. At his home I was invited for a *feijoada*, a traditional Brazilian dish of beans, sausage and meat, specially prepared for us by his 78-year-old mother. Their house is located in the northern suburb of Realengo where at almost every street corner after school one can see young boys playing with fighter kites. Some even climb on flat rooftops, the way they do in India.

The "kite room" of Zeca is on the first

floor of the family house, next to the workshop of his brother, who constructs and repairs guitars. Some rolled up and stored on shelves, others hanging from the ceiling, several thousand kites of all kinds inhabit the place. One of Zeca's favorites is the octagonal shape, which he often decorates with images and messages against violence or to promote ecological ideals. Another decorative theme for several of his kites is Charlie Chaplin's tramp figure.

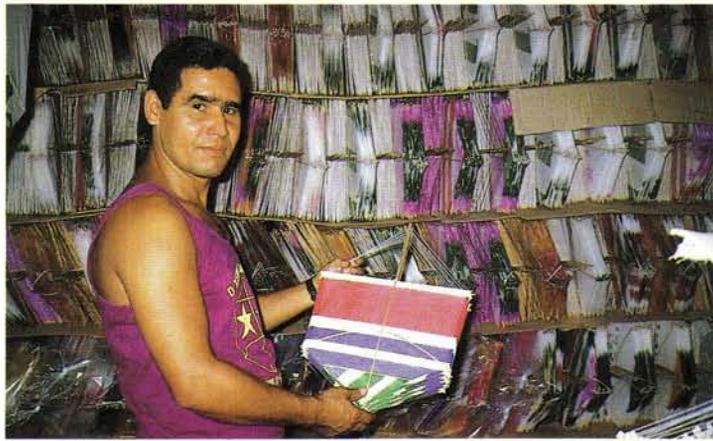
Although he is not strictly against the use of cutting line, Zeca believes that the pleasure of designing original and beautiful kites can be equal to the fun of fighting. Promoting creativity, he is trying to restore the aesthetic value that kites had when he was younger, as he says they were far more elaborate designs in those times than nowadays, with the mass-produced *pião* filling the market.

XERIFE, KITE MASS PRODUCER

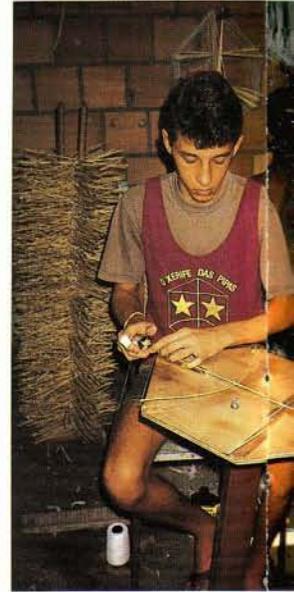
When Zeca came to pick me up and drive me to his place, we stopped on the way to visit the kite factory of his friend Xerife das Pipas. Upon arrival I was quite excited to see all the kites in the sky of this suburb—yet I felt uncomfortable when entering Xerife's workshop: I realized that all the workers here were teenage children. Certainly, Xerife is not himself responsible for the social and economic situation in Brazil which makes work for children a very common thing. (The Brazilian laws allow only children over 14 to work, but in real life 10% of the total number of workers are children 10 years old and over.) Yet it is terribly difficult to accept this when children at these ages should still be attending school.

Xerife started this business two years ago and currently employs 17 people working a maximum of eight hours a day. Every year 800,000 kites come off his small production line. This makes approximately 130 kites per day per worker. Only *pioes* are produced here, in five different sizes from 1½ to 2 feet. Their quality is far from the best but they are sold at incredibly low prices. The mass production, done at an amazingly fast pace, is perfectly organized, each worker having a specific task to repeat on every kite.

A kite frame is entirely assembled in less than 40 seconds. Once the three *taquara* (cane) struts are joined, they are placed on a revolving wooden template while a line is attached all around the frame. The frame can then be glued to the paper sail. (There is no time for piecing colored papers, so the sail is printed with various patterns.) Finished kites are hung on broomsticks stuck everywhere into the red brick walls of the room. Most



KITE PRODUCTION AT THE XERIFE WORKSHOP IN RIO, left to right: Xerife in front of a wall of kites in his stockroom; tying line around a kite frame set on a revolving template; filling plastic bottles with cerol (glass powder).



impressive is the huge stock of 30,000 finished kites I visited in the back room.

In a dark corner, a young boy, wearing a mask to prevent breathing too much glass powder, was patiently filling thousands of small plastic bottles with a dose of ground glass. On the upper floor, a brownish viscous glue would be added to fill up the typical tiny bottle of *cerol*, the mixture fliers apply to flying line to make it abrasive.

Probably there is no other answer than this boring and tedious chain work to keep up with the tremendous demand for fighter kites in Brazil.

KITE FESTIVALS

Although I couldn't attend any kite festivals during my short stay, both Silvio and Zeca told me about those currently organized in their states.

Some original kites can be seen at these festivals, most of them built with bamboo and tissue paper. These materials may impose some limitations on the size and strength of the constructions, which rarely exceed three meters (about 10 feet), but they definitely allow for the most intricate designs: birds, rockets, airplanes, dragons, box kites.

In Rio, several festivals and competitions are organized every year, usually gathering over 100 participants. Such events date back as far as 1929 and nowadays are sponsored by Departments of Culture, Sports or Social Affairs, and also by some private companies which use these occasions to promote their products. Shopping centers sometimes choose to organize a kite event to celebrate their anniversaries and are among the best customers of Silvio and Zeca.

The months of June, July, December and February are most customary for kiting

because children have their school vacations then.

In São Paulo lives the largest community of Japanese-origin people outside of Japan itself: one million people! There, in September 1992, a kite celebration was held for the 400th anniversary of the famous *wan-wan dako*. Yet I did not hear of any Brazilian kiteflier of Japanese origin making traditional Japanese kites.

Social Issues

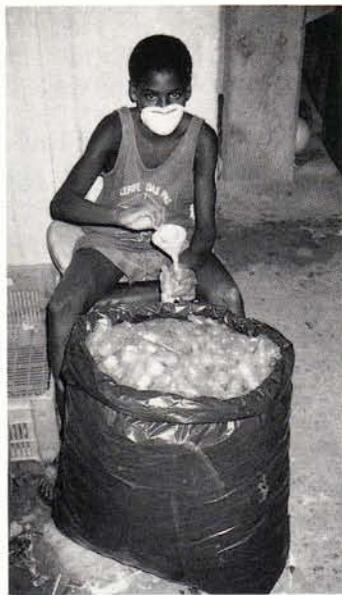
Brazil at the present is experiencing a huge social crisis. Political corruption has reached

the highest spheres of government, inflation is a nightmare (more than 500% for 1992), and social inequalities create an explosive situation in the large cities where rich businessmen and homeless children have to live together. For the poorest, delinquency and violence may come as the only solution when it is a matter of survival. Rio now has a reputation as one of the most dangerous cities in the world. The wealthy hire private guards for their condominiums while the *favelas* continue to expand.

Some kites support a campaign against the vicious circle of violence: a skull is generally the symbol for pirates, but printed on a kite with the words "Não violência" (No more violence) it becomes an emblem for those hoping for a peaceful life.

IN JAIL...

In Brazil's prisons, kites have played and are still playing quite original roles. Because the consumption of kites is enormous in Brazil, some prisons (particularly the now closed Isla Grande jail in Rio) chose kitemaking as work for prisoners. Yet in this context, it is nothing more than a tedious production



task, and I was told that kites made in prisons could be instantly recognized by their poor quality. They are distributed at a lower price by wholesalers specializing in this business.

Although it goes against the law, another use of kites is most interesting: fighting kites have sometimes been made to dive inside prison yards during recreation periods to smuggle in tiny balls of marijuana. Up to twenty such *ballas* can be attached along a kite's tail. Nowadays, guards are aware of the trick, and kites are no longer involved in this traffic, but they are still used as coded signals to transmit information to prisoners. Various color codes can give answers to their questions: black means "no" (we cannot send the money), white is "yes" (you will have a visit).

...AND OVER THE FAVELAS

Favelas are the home of kites. Especially in the evenings, hundreds of *pioes* are seen battling high in the sky. Young boys of the *moros* (mountainous parts of the city) have made kite fighting a favorite pastime because this is one of the cheapest and most thrilling games they can play. Over the decades it has become even more popular than soccer because there is no space for soccer fields in these poor areas. In Rio some *favelas* have now grown to be cities inside the city—the largest, near Leblon beach, has a population of 60,000.

Unfortunately, drugs have become a major business in the *favelas*, where no stranger should go unaccompanied. Here also kites are more than toys: they are used as signals to inform the traffickers. Whenever a police patrol is spotted, a red kite with a long red tail, the *commando vermhelho*, will be sent up in the air. The colors and the

number of kites make different codes. Children, because they are less likely to attract attention or to be arrested, are the ones entrusted with this watch over policemen.

A project called *Meninos de Rio* was organized to help homeless children. At a house next to a *favela*, 25 youngsters aged 12 to 18 have found a home; 55 others join them during the daytime. There they are assisted by teachers and educators. They can also earn some money through simple jobs, such as gardening in luxury hotels or making kites.

FORGET IT ALL, WITH FUTEBOL

All the kites made by the children in this house are printed with emblems of various Brazilian soccer teams. *Futebol* (soccer) is the national sport in this country, and a real social phenomenon. The best players, many of whom came from the poorest backgrounds, have become wealthy international stars, admired with passion by the whole population. Soccer matches are the occasion for everyone to forget about the problems of everyday life and cheer for their idols. It is not surprising, then, to find so many emblems related to this sport on kites: famous team logos, shirts, typical black and white balls, all these can be seen on fighting kites. In Zeca's photographic album, I saw an intricate creative kite from a local festival. It was composed of three separate parts: along one line were fixed two soccer player kites, one of them guarding his goal posts. Zeca explained that a ball which could slide up and down would be sent as a line climber, simulating the action between the two figures and instantly bringing applause from the audience just as in a real match.

Designs & Materials

A kite can be designated by several names other than *pipa*, according to the state or region: *papagaio*, *quadrado*, *laçador*, *caçadeira*, *caçador*, *pandorgas*, *sura*, etc.

Brazil has more than a dozen traditional kite shapes, more or less popular according to the region; their names are *estrela* (star), *barrilete* (hexagonal), *barco* (boat), *latta de óleo* (oil can, referring to the square tin cans used as reels), *peixinho* (little fish), *arraia* (ray), etc. Here are a few other interesting designs:

Octagonal: Mainly made in Rio, this kite is often chosen by those who want to express themselves through graphics because it offers a large surface for decoration. Its size may vary from a couple of feet up to about 10 feet. Some have many tiny paper flaps, or

banderinhas, installed on lines attached between *flecha* (cane) struts protruding from the leading edges of the kites. Highly decorative large *octogonais* are flown mainly on special occasions, during festivals and kite contests.

Capucieta: This is a traditional sparless paper kite, using folds to give a minimum stiffness to the sail. A similar design is also popular in Chile under the name of *cam-boucha*. According to Silvio, this kite was brought to Brazil by Italian settlers. Indeed, similar kites exist in the Mediterranean area, particularly in northern Africa.

Arraia bahiana: The very special feature of this rectangular kite is that its two diagonal spars are glued one on each side of the paper sail. It is flown with a five-point bridle and a *rabiola* (tail) of cotton balls instead of the regular paper strips.

BAMBOO, TAQUARA, FLECHA...

Various kinds of native canes and bamboos are used in Brazil to construct kite frames: *Indaya*, *cana de India*, *taquara*, *flecha*—each species has different characteristics.

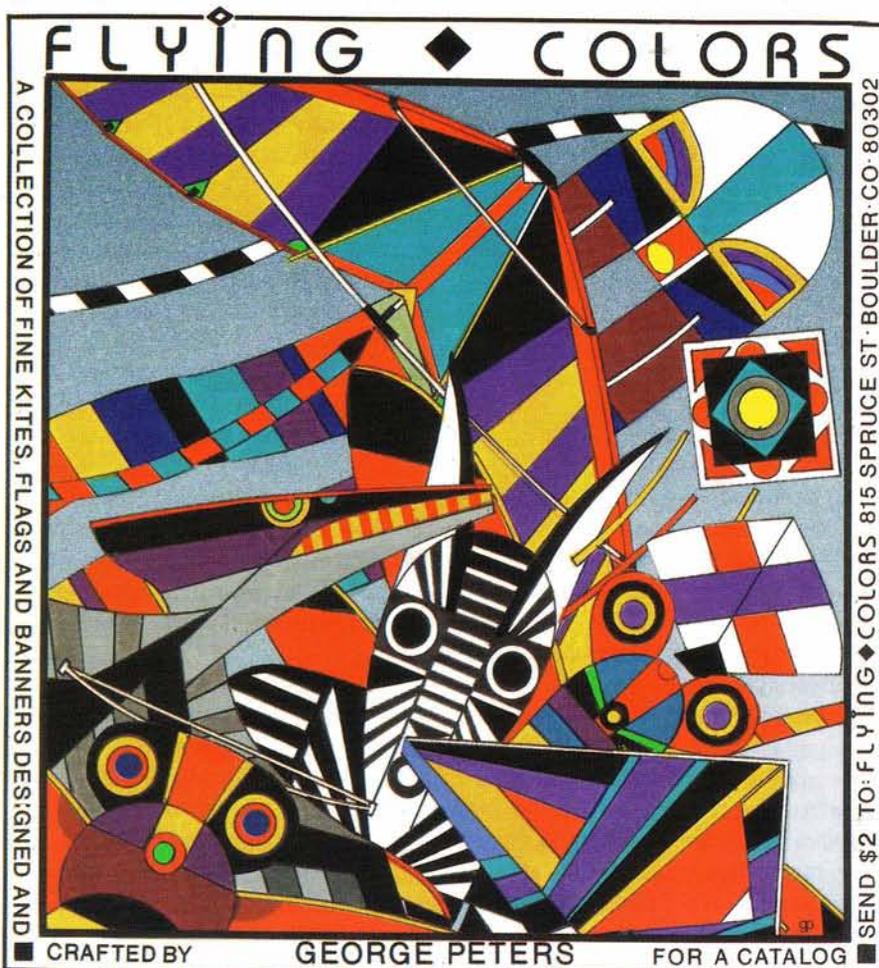
Taquara (probably a variety of cane or palm) is purchased by kitemakers in presplit knotless lengths of about two feet. It is a good deal more flexible than bamboo. Easily trimmed through a drawplate, it makes a fine *pião* spine, but, I was told, the spars should preferably be made with real bamboo.

Flecha (called *yaripa* in Colombia) is a type of very straight, tapered cane without knots, often used to construct the larger kites. Its diameter is about the same as a finger, and the inner core is filled with a kind of rigid foam which makes it remarkably strong and stiff for its incredibly low weight. Cotton bird kites and large octagonals are made with *flecha*. To make stronger spars, and at the same time eliminate the tapering, two inverted *flechas* can be joined together and wrapped in a long strip of glued paper.

Buriti: Small kite spars can also be cut from the spines of dried coconut leaves. These are called *buriti* and are mainly used in the state of Bahia, while in Amazonas split palm-tree branches are the basic material for struts.

COVERING MATERIALS

Papel de seda (silk paper) is the most commonly used material for kite sails. Even some large kites are made with it, despite its great fragility. Stronger papers are available but chosen only for the largest kites. Except for the Rio birds previously mentioned, traditional kites are never made with cloth. Only some strips of scrap might be used as



tails. Plastic is still very rare: only once did I see some *arraia* kites for children with printed plastic sails (and sewn pockets).

LEAF KITES

As in many other countries, a leaf kite can be found in Brazil.

Silvio told me that fugitive slaves of African origin have used kites made from leaves, with straw tails, as signals to warn their fellows when the Portuguese were in sight.

WESTERN-STYLE KITES

Modern kite materials are still difficult to find in Brazil. In São Paulo, I have seen some huge delta kites (with a 33-foot wingspan) made by amateurs using cotton and bamboo, and some cellular kites using aluminum tubing and a rather stretchy clothing-grade ripstop nylon. Fiberglass struts can be obtained by kite manufacturers but are rarely used because their prices are not low enough to make the kites affordable by most customers. Kites made by the Icaro company, for instance, use pine frames with welded plastic sails, which are more durable than paper, cheaper than cloth and quick to make, precluding any stitching.

The Brazilian Fighter

I was told that several types of fighting kites can be seen in Brazil. For instance, the small square

peixinho is fairly close to an Indian or Chilean style fighter. Yet by far the most popular kite is a fighter of pentagonal shape, which could be roughly described as a rokkaku without the upper triangle of sail. According to Zeca das Pipas, 35 million of these kites are made and sold every year in Rio, which is the main production center for all Brazil.

Although its shape basically remains the same all over the country, this typical Brazilian fighter bears a different name according to the regions. Called *maranhão* in São Paulo state, it is referred to in Rio de Janeiro as *pião* (which means *top* and the kite is named after it because its shape is similar to a top's). Maranhão is also the name of a northern state in Brazil. Some say that the kite was named after the state because its shape slightly resembles it, others believe that it is because it originated in that region. The latter seems to be a plausible explanation because it seems this kite was popular in the northeast regions before it reached southern Brazil, Rio de Janeiro and São Paulo.



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GRAPHICS ON FIGHTERS

When working on the design of a fighting kite, one has to make sure that it will be easy to identify high up in the sky. This is why most Brazilian fighters have very simple and strongly colored graphics, using the same principles as flags, banners and shields: parallel, crossed, diagonal or radiating stripes, circles and round dots, chess-board patterns, and all their possible combinations.

The colors sometimes refer to *futebol* teams (blue and white stripes, for instance, are the colors of the national team).

For purely decorative purposes, some add a very small triangular sail called *biqueira* at the top of the spine, or very small paper fringes, called *roncadeiras*, along the lines from the kite's shoulders to its nose. These lines are essential because when they are put under tension they cause the nose spar to curve and act as a spring to bow the top horizontal spar.

THE TAIL

Although I have seen and flown a large *pião* made by Zeca which performs remarkably without a tail, all fighters of normal size absolutely require one.

A special tail, called *rabiola*, gives a very specific behavior to the Brazilian fighter, i.e., natural stability, but it still allows the trained flier to maneuver the kite. One could say that, because of its tail, the principle of this kite is the opposite of the Indian fighter: the Brazilian is an extremely stable kite (that will fly perfectly, even when left without attention) on which you have to work, "pumping" the line to make it change direction; whereas the Indian kite is an unstable one that you make stable when pulling the line, and that very quickly hits the ground if you stop controlling it. There is no doubt that the Indian kite is more active and responsive, but I have seen how quickly an expert like Marcello Terto Carneiro can put his *pião* into a lightning attack dive. It is just amazing, especially when you try yourself and despite all your efforts find it almost impossible to make it move to the right or to the left!

It is said that the main qualities of a Brazilian fighter come from its tail, which determines much of the strength and behavior of the flight. *Rabiolas* are usually fairly long (about 8m [26 ft] for a 45-cm [18-inch] kite) and made of thin strips of paper or plastic attached on a cotton line at calculated intervals. Plastic is more often used for tails today because it lasts longer. Paper strips are easily cut by the opponents' lines; hav-

ing lost too many of these, a kite may become more difficult to control and is likely to lose the fight rapidly. Yet the use of plastic is a serious drawback for a clean environment: kites' tails often get caught in electric power lines and trees. If the kite can be retrieved, most often the *rabiola* is not. After a few weeks, a paper tail will most certainly be dissolved by the rain, but waterproof plastic *rabiolas* may last for months



Pages from graphics sketchbook of Marcello Terto Carneiro show "the fastest kites in Rio."

before they fall to the ground. Above *favelas* and all the places where children play with kites, they can be seen, hanging everywhere, even in the high voltage power lines.

Whatever tail material is used, the space between the first strip and the bottom of the kite, the number of strips and their spacing are very important because they will determine the responsiveness of the kite. About 50 strips are attached, the 30 closer to the kite being set at smaller intervals than the 20 remaining ones towards the free end of the tail. Sometimes a *chicote* is added. It is a short length (2 to 5 m [6 to 16 feet]) of *cerol* line attached at the end of the tail.

I have seen a kitemaker, who couldn't even afford to use cotton thread in the construction of his kites, making a *rabiola* with a kind of cheap plastic ribbon and some strips of computer printouts recovered from the bins of paper shredders.

THE BRIDLING

Bridling can be either two- or three-legged. The former is said to give more speed and lightness; the latter, most often used, to give more power and control because it prevents the lower part of the spine from bending backward.

THE CUTTING LINE

Cotton line is indeed valuable, and more expensive than the kites themselves! A small standard reel of 183 meters (600 feet) is worth the price of five fighters.

Most often fliers use the number 10 cotton line manufactured by Linhas Corrente. In 1991, the company sold six million of these particular spools of kite thread. It is remarkably strong, and a special resin coating gives it some stiffness which prevents entanglements and makes it last longer.

In the sky, nine kites out of 10 are flying with cutting line. It is not colored, which makes it impossible to differentiate it in the sky from regular line. Probably, one should say that cutting line is the regular line! Be careful whenever you put something up, whether it is a fighter or not, because it might instantly become a new target for others.

Unlike the custom in India or Indonesia where one can buy an already prepared glass-powdered line, all you can purchase in Brazil is a small plastic bottle of *cerol*, the mixture of ground glass and glue, that you will have to apply yourself to your flying line. This is normally done by unrolling the line and attaching it

between two posts, moisturizing it with a wet cloth and applying *cerol* directly with your bare hand. A second layer can be added if you want the line to be really abrasive. Some use a much quicker procedure: they cover the line with *cerol* while the kite is flying, progressively letting out some line as it passes through their palm full of the abrasive mixture. This can only be done by experts and provided the wind is strong enough.

Some fliers make their *cerol* themselves. They put fine glass, such as light bulb glass, in a closed metallic can and hammer it until the glass is well ground. Then, after punching a small hole in the can, they collect only the finest pieces and filter them through a stocking. Regular white glue is good enough to adhere this fine white powder to their line.

Usually, only a length of 100 to 200 meters (about 300 to 600 feet) beneath the kite is covered with *cerol*, the lower part of the line remaining clear so the flier will not cut any fingers while manipulating it. It is a general rule among children flying kites that no one should *cortar a mano*, that is to say, "cut close to the hand" of an opponent's line by attacking its nonabrasive section. Those who don't want to be the victims

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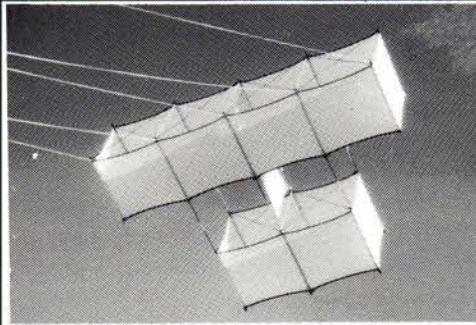
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Silvio Voce, Media Star

Kites are mainly a simple traditional game for kids in Brazil. Yet by mastering the sponsoring and media systems, Silvio Voce, who lives in São Paulo, the economic capital of Brazil, has become a kind of nationwide "Mr. Kite."

Born in 1953 in an Italian Brazilian family, he was just like millions of other kids there: he used to fly fighter kites and even built some for sale to make some pocket money. After working during seven years in the national airline as a ground maintenance technician, he chose in 1983 to turn his passion for kites into a full-time occupation. Organizing kite events, exhibits and workshops for children all over Brazil, he gradually built up a team, from 4 to 20 friends, to work with him.

In 1986, Equipe Silvio Voce was officially born. Travelling around the vast country, to schools, art centers and shopping malls, the entourage has taught several hundred thousand children every year how to make and fly simple kites. (In 1986 alone, 600,000 children attended these workshops!)

Since the beginning, Silvio has been sponsored by several private companies: a radio station, a paper factory, an adhesive tape maker, a kite manufacturer, and Linhas Corrente, a major company which produces cotton thread.

The reason these companies were so interested in Silvio's work is that he has a proven success record with the media. Think of this: in 1991 alone, Silvio was interviewed or reported 72 times by various TV channels; he made 36 radio interviews and was the major topic for 4 magazine feature articles—and all this does not even take into account the



Silvio Voce of São Paulo and two of his kites inspired by traditional Afro-Brazilian masks.

many articles in local or national newspapers. Almost always, the sponsor's brands are mentioned or seen, so this turns out to be a good deal for both sides.

The media success of Silvio of course inspired other Brazilian kitemakers, but until now none has been able to achieve the same scope, although some may be just as professional as far as kites are concerned. Lately, Silvio Voce has been involved in too many workshops, travels, festivals and publications to actually find the time to create new kites.

In 1988, the São Paulo Cultural Center exhibited 40 kites designed and made by Voce. They were directly inspired by traditional Afro-Brazilian indigenous masks of the Baikiri tribe. Most of the kites were sold, mainly to Japanese, American and European tourists visiting the exhibit. Similar to the works of some North American kitemakers who adapt traditional American Indian graphics and shapes to their kites, they show how strong, attractive and meaningful are the designs of the native Indian civilizations.

endangering the life of innocent children should be encouraged. Others insist that without the cutting line, all the thrill of kite fighting is lost, and that it should be the responsibility of each person to fly safely. Even if a law would forbid the use of *cerol*, few of the hundred thousands of Brazilian children who practice kite fighting every day would quit their favorite pastime.

FIGHTING TACTICS

Techniques vary according to wind conditions but there are basically two techniques to cut an opponent's line. In all cases a larger and more powerful kite will have an advantage, but still the most important thing is to have more line out than the chosen victim. This certainly explains why these kites are flown so high.

- Attacking from above, the kite is made to dive and its line will normally cut the other's when coming across it. Using his or her line, the winner may even catch the loose kite by its tail. This action is called *cortar e aparar* or "cut and catch."

- Attempting a cut from underneath is more risky; a counterattack is possible and if the attacking kite is not going straight up but slightly on the side, it is likely to be cut loose. *Aparar* is also more difficult in this case because one has to dive immediately after the cut in order to catch the kite before the wind blows it away. Some manage to catch the tail first and cut the line immediately after, at the risk of cutting the tail which invariably transforms the victim into a crazy spinner.

With this article I do not pretend to give a complete report on Brazilian kites. I have many more places to go, more kites to see...

PIERRE FABRE is a well-traveled kiter and graphic artist who lives in Paris, France.

A traditional arraia kite with Brazilian flag design flown by children at the opening ceremony of the Global Forum, Rio, June 1992.



of an unfair attack prefer to put *cerol* on the total length of their line.

Spools are simply made from round or square cans, sometimes covered with plastic, probably to make them look nicer and prevent them from rusting.

THE DANGERS OF CEROL

As in most countries where kite fighting is a popular game, sometimes practiced without much care for elementary safety, dead-

ly accidents have occurred with *cerol* lines, cutting jugular veins on the necks of children... In India they use a thicker thread, number 8, except in competitions, where the standard is number 10, the same as for all fighter kites in Brazil. The same brand (Coats Corrente in Brazil and Coats Chain in India) is the favorite of kitefliers in both countries! This company has factories all over the world. Some kitefliers, like Silvio Voce, are actively trying to ban *cerol* because no game

Left and center, buggies at the Boogie—the largest assemblage of kite traction practitioners in history. George Pocock would have been proud.

POCOCK RIDES AGAIN

Buggies!—north & south

The Buggy Boogie Thang, 17–20 January 1994 and...

a study in contrasts: by Michele Velthuisen-de Vries and...

It was simply perfect. On that first morning, we realized what an ideal location we had at Lake Ivanpah, California for kite buggying.

The bed of this dry lake, although cracked from the heat, is as smooth as a parking lot and devoid of any obstacles whatsoever. The lake itself is enormous (approximately 3 by 10 miles), providing buggy riders of all skill levels more than enough space to spread out. Furthermore, although the lake is home to the endangered desert tortoise, the fragile vegetation where the tortoise lives is situated on the perimeter of the lake, so buggying on the bed of the lake itself has little or no impact on the environment.

And finally...when the wind blows in this valley, it is stable and reliable.

By 10 a.m., the parking area was packed with cars and vans, and from every trunk there now emerged buggies, kites and buggy enthusiasts of all shapes and sizes.

Of the 100 or so riders who showed up on the first day, perhaps about a third were from abroad, mainly Europe. Ultimately, there would be 11 countries represented and a total of about 250 people (buggies and spectators). Most of them had just taken part in the Kite Trade Association show in nearby Las Vegas, Nevada, but Peter Lynn had flown all the way from New Zealand just to participate in the Buggy Boogie Thang.

Conditions the first day were ideal—blue skies, temperatures in the 60s, and winds up to 25 mph. Within a few hours the skies were filled with kites ranging from colorful Quadrifoils to graceful Peels, and the lake was transformed into a sea of cruising buggies.

I positioned myself in the middle of the lake so that I could observe and photograph the event close up; I felt like a buoy, alone in the middle of a sea of mariners. It occurred

to me how quiet the lake was despite the number of buggies crossing it—they hardly made a sound even as they sped past me.

Quadrifoils with very short lines seemed to be the most popular kites at this event. An interesting quad-line design was the Spider, designed by Mick Parsons from Wales. This kite had zippers lining the profiles so that sections in the kite could be added or taken out according to the wind. Joost Meijerink from the U.K. flew his train of Pro-Speed Flexifoils throughout the event. These kites were designed of new materials for stacking in light winds—the better to buggy with.

The dual-line 5m² to 10m² Peel kites, flown with much longer lines than the Quadrifoils, were also popular. Andrew Beattie from the U.K. had even come with a gigantic 15m² Peel which attracted quite a bit of attention. Nop Velthuisen of the Netherlands flew a Sputnik 4—the latest model in his Sputnik series—and, when the winds picked up, he was the only one flying a stack of framed kites: three Speedwings. He was also the only one riding a four-wheel buggy. This was his first opportunity to try out the four-wheeler extensively and he found it to be particularly comfortable and stable at high speeds, although not necessarily faster than the other buggies.

Many Peter Lynn buggies rolled about, including quite a few look-alikes, all made with three wheels, webbed seats and front foot pedal steering. Noticeable, however, was the new Peter Lynn design—the Flexifoil Buggy—which, unlike the webbed-seat original, had a fully covered seat. Julian Wolfe-Patrick, from France, was the only one present with a fiberglass buggy. Despite its being a bit wobbly, I was told it was comfortable

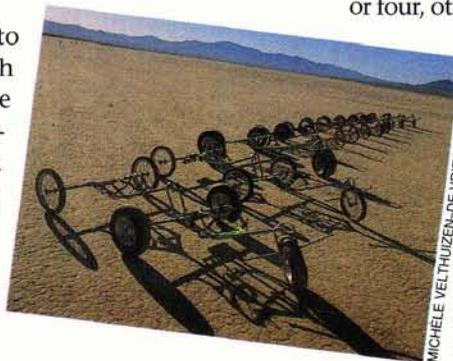
and that it performed well. From Germany, Tomas Jeckel of Pha'eton rode an odd-looking buggy with three very large, high wheels called "das Trike." Several home-grown varieties using bicycle wheels took a spin on the lake. A few riders doubled their fun with tandem buggies.

All in all, there was much variety to be seen at the Buggy Boogie Thang and no one seemed to mind when, on the following days, the winds did not pick up until mid-afternoon. No buggying meant an opportunity for everyone to get acquainted, swap ideas and chat about personal experiences. This they did with relish, from the seats of their buggies and with a cold drink in their hands, sometimes in groups of three or four, other times in circles of up to ten.

On our third and last day at the Buggy Boogie Thang (the event itself actually lasted four days and included a Naked Buggy interlude!), the winds once again did not pick up until

late in the afternoon. Then something very strange happened: suddenly a cloud of fog (some claim it was dust) covered the lake like a blanket and the winds picked up. All the buggies who had been lazing around only minutes before suddenly jumped onto their buggies and headed for the invisible horizon. Eventually, only the kites protruding above the mirage-like cloud were visible.

As I stood watching the phenomenon, munching on some snacks generously provided by the initiators of the event—Corey Jensen and Scott Dyer—there wasn't a single thing I could think of to complain about. The location was perfect, the people were fun, the organization casual and friendly and the weather warm. A few people would have liked the chance to do some racing, but this is a wish I am sure can easily be accom-



MICHELE VELTHUIZEN-DE VRIES

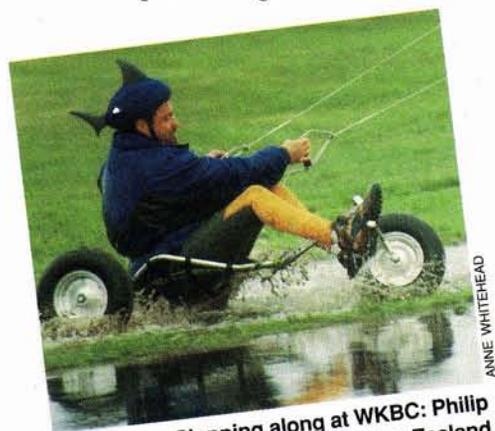
th, dry & wet

the 1st World Buggy Championships, 18-20 March 1994
Peter & Anne Whitehead



modated at the next Buggy Boogie Thang.

But is there going to be a next Buggy Boogie Thang? The 1996 KTA show will be in Las Vegas, and Corey guarantees that will be the time when the buggies roll and swirl over Ivanpah once again. —M. V.-de V.



Slopping along at WKBC: Philip McConnachie of Ashburton, New Zealand

A one-in-one-hundred-year storm, the weather bureau called it. Our big event, which went by the unfortunate name of the Third Southerly Kite Festival, the 10th Annual New Zealand Kitefliers Association Kite Festival and the First World Kite Buggy Championships (whew!), was...WET.

We had some of the people, we had the area (the unused Wigram airfield at Christchurch, New Zealand), but we didn't have the weather. (The weekends before and after were glorious.)

With all the 18-or-so buggies in attendance, there would have been some very good racing. If it were a formula-one race, you would have had people worrying about whether to use wet or dry tires. But only a hardy seven souls bothered to race in the atrocious conditions, although each contest was visited by periods of fine weather and periods of rain. The serious competitors were all wearing wet suits, to keep dry as well as warm. I must repeat: *this weather was very unusual for New Zealand.*

Everyone kept entertained under the large canopy, and I must say that I think it was one of the most sociable kite events I have attended. There was no flying and no pressure to fly—so we could talk. Spectators

numbered 50 to 100 at any one time, maybe 500 total.

Five races were held on Sunday, with up to seven competitors to a race. Each faced differing weather conditions, from fine to wet to howling gales. The racers were constrained by a large Peter Lynn Octopus kite in the sky and by aircraft runway tarmac on two sides of the field. They had to use their own judgment for how much of the space to use.

The race track was triangular, laid out as a yacht match would be. The two judges (Ian Meredith of the U.K. and Peter Whitehead of New Zealand) differed in their rules for finishing as the races progressed.

The competition was very tight and not final until the last race. Because of the weather, people who finished well in one race would not necessarily be able to finish the next. Different numbers of competitors led to different point allocations in each race. Some fine tuning will have to be done to the scoring system in the future.

All the buggies except one were made by Peter Lynn Ltd. of New Zealand, and all the contestants but one were using Peter Lynn Peels. The buggies experienced a great deal of trouble in the conditions. In one race, some contestants had done two laps of the field, only to fall foul of the weather and be pushed down to the far end of the field. During this squall, one lucky competitor was just about to start his downwind run, and so ended up losing no time and in the end winning that race.

After the five races, the winner was duly announced, and it turned out to be: Pete Lynn (the younger), followed by Robbie Ward from Ashburton, New Zealand and the third, Dominique Scholtes of The Netherlands.

Depending on how you judge a kite festival, we actually had a good one (even though I flew only about two kites) because socially it was one of the best. The organization was performed by a group of Christchurch fliers based around the Global Sky kite shop and including Yvonne De Mille, Sue Delaney, Nigel Harris and Des Pitfield.

Talking to Des afterwards, I learned that he was getting lots of comments from people saying they did enjoy themselves.

I guess we did OK. —P. & A.W.

• **Buggies Sold Since 1990** 2,000?
Comment: Manufacturers aren't telling, but this unofficial estimate of worldwide sales does not seem far-fetched.

• **Buggy Manufacturers in Business** 7
Comment: These seven are the more established companies marketed in the U.S., but on the fringe are countless wannabes, one-offs and home-builts.

• **Buggy Clubs and Newsletters** 4
Buggy Pilots International, Corey Jensen, c/o Windborne Kites, 585 Cannery Row #105, Monterey, CA 93940, USA. Tel: 408-373-7422; Fax: 408-373-0688. Founded 1993. Four issues of four-page "Buggy News" were published in 1993, six are planned for 1994.

Kite Traction Group, Andrew V. Beattie, P.O. Box 109, Basingstoke, Hampshire RG24 7YB, England. Tel: 44-256-464-912; Fax: 44-793-614-297; E-mail: kites@tug.com. Founded 1993. A "zero" issue of nine-page "Kite Traction Newsletter" was published in September, 1993, first edition "will follow."

Kite 'n' Trike Association Europe, Tomas Jeckel, c/o Pha'ton, Liebigstraße 9-11, D-52070 Aachen, Germany. Tel: 49-241-962-001; Fax: 49-241-166-116. Founded 1993. Two-page "Hi-Ways" newsletter in German published four times a year, one issue devoted to buggies. The only club so far with specified dues: DM 15 (Europe) and DM 25 (elsewhere).

Parakart Association, Mick Parsons, Pembrey Farm House, Pembrey, Burry Port, Dyfed SA16 0YT, Wales, U.K.. Tel: 0554-834-937. Founded 1993. No periodical, but organizes competitions, has a rules booklet and is affiliated with the British Federation of Sand and Land Yacht Clubs.

Comment: None of the clubs have officers, bylaws or pretensions, but some may have trade connections.

• **Upcoming Buggy Events** 2
July 16-17, 1994: *Fylde Coast Cup*, 2nd leg of UK National Parakart Championships, Lytham St. Annes near Blackpool, England. Contact: Parakart Association (above).

September 10-11, 1994: *Bonneville Buggy Enduro*, timed record-setting and races for distance and speed in four categories on a 5-mile course, Bonneville Salt Flats, Utah. *Unconfirmed at presstime.* Contact: Bob Childs, c/o It's a Breeze Kite Co., P.O. Box 2282, Boulder, CO 80306. Tel: 303-440-6303; Fax: 303-449-5941.

Comment: Many kite events include some bugging.

• **Buggy Videos** 2
Gwithian Sport Kite Classic, 1992 and 1993 editions, each 30 minutes and \$30 (entire proceeds to Downs Syndrome Association). Majority of footage is on buggies. U.S. format available from Chicago Fire Kite Co., 3530 N. Fremont, Chicago, IL 60657. Tel: 312-327-6814.

• **Buggy Books** 1
Buggies, Boats & Peels by Peter Lynn, 12 pages, \$6.95 or free with purchase of a Peter Lynn buggy. From distributors of Peter Lynn buggies and from *Kite Lines*.

• **Buggy Trends** 3
1. Many people have observed that the proliferation of buggy makers has neither brought prices down (buggies still cost about \$500 plus kite, line and safety accessories) nor raised quality up significantly over the original Peter Lynn Stunt Buggy.
2. An estimated 30% of kite messages on the Internet refer to buggies.
3. From Michael Graves: "Many avid buggiers lose interest in other aspects of kiting. We sometimes see people sitting in their buggies waiting for wind, while their expensive ultralight delta kites stay in the bag."

POCOCK RIDES AGAIN

Scout Buggy

building a kite buggy on a shoestring

Designed and Built by Larry W. Gleckner
Photographs by Mel Govig

ADVANTAGES OF THE SCOOT BUGGY

- Low cost
- Can be built in your spare time
- Much stronger frame than commercial buggy
- More comfortable than commercial buggy
- Quick (approximately one minute) and easy assembly and disassembly on field, and no tools needed
- Can fit into the back of a station wagon, van, or truck without any disassembly

DISADVANTAGES

- Slightly heavier in weight to carry than commercial buggy
- Center of gravity is higher and farther back than commercial models.

THE MAIN IDEA . . .

This buggy was not designed for competition or for high speed. It was designed to be made at home in your spare time at a low cost and JUST FOR FUN.

CONSTRUCTION

Step 1: Axle

Parts:

- (1) 39"-long piece of black water pipe, 1 1/8" OD x 3/4" ID
- (2) 8" hex bolts, 1/2"-13 thread
- (2) pipe reducer bushings, 3/4" to 5/8"
- (2) knurled steel knobs 1/2"-13 thread

Assembly:

1. Modify the bolt head so it slides into the pipe.
2. Drill out the reducer to 1/2" ID.
3. Weld reducer to bolt, then into the pipe as shown.
4. Cut off excess threads on bolt and chamfer.
5. Adjust wheel bearing pressure with knob and drill 1/8" hole in bolt for clip pin (see diagram 3 for details).

Buggy wheel with its clip pin in place.



Thinking about flying a powerful quad-line kite while riding on a buggy? You and everybody else. But to date the buggies produced commercially are a heavy piece of change for the average flier, especially considering you also need a fairly expensive kite.

So I designed a buggy using a scooter frame and wheels easily obtained at a yard sale or flea market. Other items I bought at a hardware store.

The Scout Buggy is made mostly from the metal parts of the scooter and requires different tools and skills from those you use in working with wood and fabric. A bandsaw with a metal cutting blade and a drill press will greatly reduce the physical effort required but are not essential. The parts are fastened together by welding, either arc welding or oxyacetylene. If you have the equipment and skills, you can do this yourself. If you can't do the welding, have all the parts cut and fitted together so that all the welding can be done at one time.

Since this buggy is made from an assortment of second-hand parts, you may have to modify the design to fit the parts that you have accumulated.

For example, you could spread the bars of the frame apart and use the handle bars to make a frame for a webbed seat (as used on many buggies). Get the webbing from auto seat belting. This should lower the center of gravity and move it forward.

The scooters I used had 12 1/2" tires. There are scooters that have 14" tires and a bigger frame. If you want a longer buggy and bigger wheels, use two bigger scooters.

MY COST BREAKDOWNS

• 2 used "Curb Cruiser" scooters	\$15
• 1 used stadium seat	1
• hardware parts	15
• 3 new tires	18
• steel plate and welding	75
MY TOTAL COST	\$124

Your cost will depend on where you have the welding done or if you can do this yourself.

Step 2: Frame—"Curb Cruiser" Scooter Parts:

- (1) scooter—frame only
- (2) steel nuts, 1"-8 thread
- (1) 1/8" steel plate 6" x 13 1/2"
- (1) 1/8" steel plate 1 1/2" x 3 1/2"
- (1) 1/8" steel plate 3" x 3 1/2"
- (1) 1/8" steel plate 5" x 3 1/4"

Assembly:

1. Modify the slotted area at the rear of the frame by cutting a 1 3/8" hole using a hole saw.
2. Drill out the two nuts to 1 1/8".
3. Cut and bend steel plates (see diagram 1).
4. Weld nuts, seat bracket, and reinforcing plates (see diagram 2).
5. Drill holes for seat mounting.
6. Drill hole in nut for axle lock pin after welding is completed (see diagram 3).



Axle linchpin on underside.

Step 3: Front Fork and Steering Assembly

Parts:

- fork and bearing assembly
- (2) 7" prebent fence hinge bolts, 1/2"-13 thread, with nuts
- (2) 1/2" rubber cane tips
- (1) piece of non-skid tape
- (1) piece of black electrical tape
- (1) front fork from scooter

Assembly:

1. Drill and tap fork peg holes to 1/2"-13 thread.
2. Cover peg with non-skid tape, secure with black electrical tape on each end and add rubber tips.
3. Screw pegs into tapped holes and lock with nuts (see diagram 4).

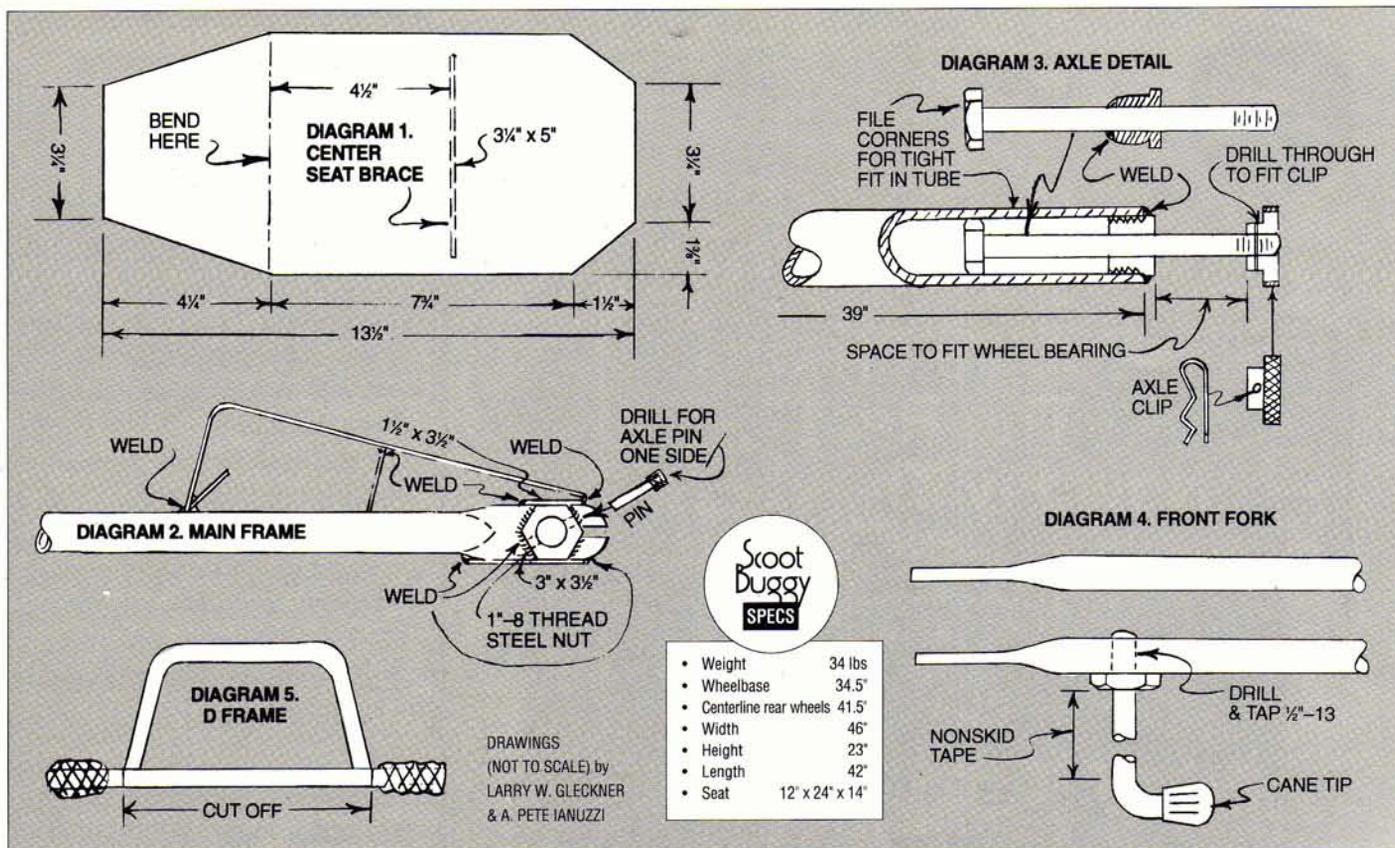


Foot peg for steering.

Step 4: Seat

Parts:

- (1) folding stadium seat with front hooks removed. Recover seat if necessary.
- (6) 1/4"-20 thread truss head bolts 1 1/4" long with self-locking nuts
- (4) 3/8"-18 thread hex bolts 1/2" long with self-locking nuts
- (8) #8 pan head sheet metal screws 1/2" long with washers



- (2) 24" lengths of 1 1/2"-wide webbing
- (2) handle bars from scooter

Assembly:

1. Remove bottom and top cushions to allow for painting and assembly.
2. Take two handle bars and cut off handle grip tubing on each side to end up with two frames that look like a D (see diagram 5).
3. Mount two frames on bottom of seat with tops being 24" apart. Mount using 1/4" hardware.
4. Paint seat.
5. Attach webbing from D frame to back support on each side using #8 hardware. (Note: This gives needed support yet allows seat to fold.)
6. Bolt seat to seat bracket and reinstall top and bottom cushions.

Step 5: Wheels

Parts:

- (3) wheels from scooter
- (3) replacement tires and inner tubes, if required, 12 1/2" x 2 1/4" or to fit scooter rims
- (1) existing front axle and existing bearings from scooter
- (2) sets of bearings for rear wheels
- (6) heavy flat washers 1/2" ID x 3/8" OD

Assembly:

1. Clean and regrease all bearings.
2. After painting, install front fork assembly.
3. Some bearing cups may need to be machined to .530 for clearance for rear axle bolts.

Step 6: Final Assembly

1. For best protection, remove all rust, then prime and paint all bare metal parts with an anti-rust paint.
2. When all is thoroughly dried, assemble front fork, seat assembly and rear axle.
3. One wheel and lock pin must be removed to facilitate axle removal for easier transportation.
4. For cosmetic reasons, scooter foot plate can be cut and reinstalled if desired.

ASSEMBLY ON FIELD

1. Slide in axle.
2. Pop in lock pin.
3. Slide on rear wheel. Be careful that the bearing and the washers are in place.
4. Tighten knob and put in clip pin.
5. For transportation from car to field, make a simple harness out of 1/4"-diam. rope with a loop on each end and a large loop in the middle. Slide the end loops over the foot pegs. Pull from the center loop. Great way to haul your Scoot Buggy, kite stuff and picnic supplies.

DISASSEMBLY

1. Remove axle knob and clip pin and wheel and axle lock pin.
2. Slide out axle.
3. Reattach wheel and knob and clip pin (don't lose loose washers and bearing). Ready to carry.

Sedgwick & Taft's SEVEN SAFETY RULES for Power Kiting*

1. Use appropriate equipment, including safety gear, particularly a helmet and a quick release system (for buggies add shoes and gloves).
2. Maintain your equipment, especially your flying lines and connections.
3. Don't fly in rain or stormy weather.
4. Avoid all overhead wires.
5. Beware of obstacles, such as rocks or bumps. Know your terrain.
6. Keep yourself and your kites clear of other people and their kites.
7. Know your abilities and your equipment limitations. One mistake could be your last.

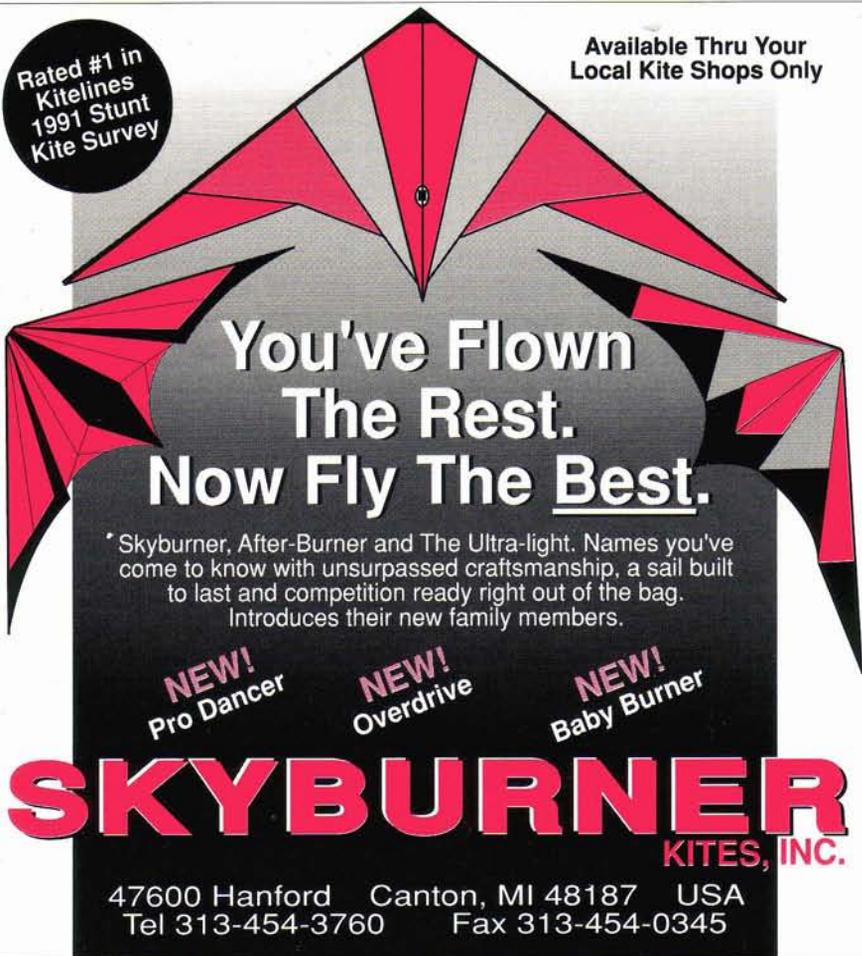
Neither the author nor the publisher assumes any liability for actions or consequences resulting from the construction or use of the Scoot Buggy.

*Lee Sedgwick / Sue Taft rules reprinted from *Kite Lines* Summer-Fall 1993 as a continuing safety reminder to the kite community.

Larry and Cheryl Gleckner have been making and flying kites out of Elizabethtown, Pennsylvania for eight years. They are well known along the mid-Atlantic seaboard for their creative soft kites and wind-socks, such as their Bubble Babies.

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Photographs by Mel Govig

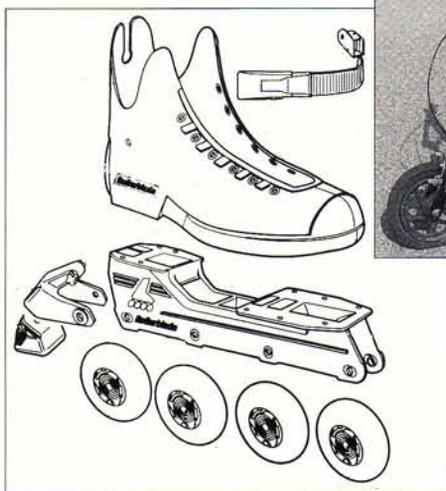
Daredevil kite-powered skating is one of my compulsions. But when roller kiting on paved parking lots was the only option, it couldn't compete with buggies on grass for spectator interest.

That's what led me, with help from friends, to engineer the contraption that would allow us back on the flying fields. These off-road skates are made using very available components: scooter wheels.

We named them the Wheels of Doom because of their "lack of good sense" appearance, but in fact, if properly made, these skates are quite stable, safe—and fast. Anyone who knows how to skate and how to fly a kite can put the two skills together and power skate in style.

Here's how I make the Wheels:

1. Start with good-fitting in-line skates (I find Rollerblade® Lightning® TRS™

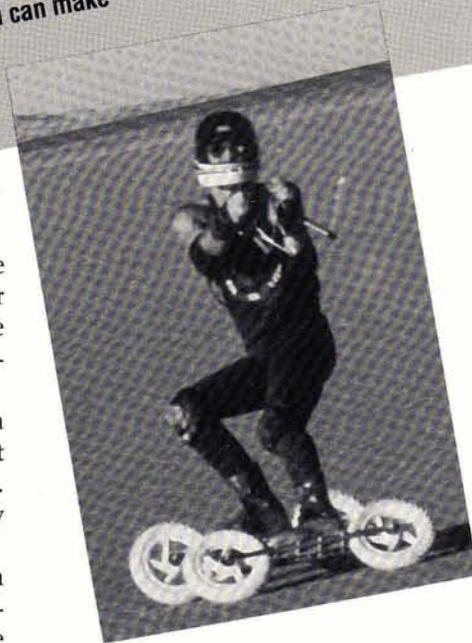


Above, in-line skate structure. Inset, typical flea market scooter (cheap source of tires).

skates are the best for this adaptation).

2. Scooter wheels and tires in 12" diameter can be purchased from most bicycle shops. It is advisable to spend a little more and get the puncture-resistant inner tubes.

3. The scooter wheels come with standard bearings which are fine for grass but not so great for sand or dirt. A bearing company can set you up with a set of sealed bear-



Bob Childs scoots around at the Buggy Boogie Thang on his Wheels of Doom, one of the zanier options in kite traction.

ings which have the proper fit.

4. I had a machine shop help me with the metal support rails. Essentially, you'll need four steel rails $\frac{3}{8}$ " x $\frac{1}{4}$ " and about 24" to 26" long. It is not possible to give exact measurements for the drilled holes because they change with the size of each boot. The wheel axle holes are to be drilled as close to the ends as possible. Mount the wheels and center the boot so that $\frac{1}{2}$ " remains between the toe and the front tire and between the heel and the back tire.

5. Mount the boots with long bolts and spacers through the axle holes of the skate rails. Off-center each boot to the inside to provide more stable balance.

6. Experiment with off-setting the wheels for more agile performance.

7. Use great care while learning to power skate, especially during launching and landing. With practice you'll learn to lean against the wind for cutting sharp maneuvers and you'll go faster than the buggies—if you want to. (I'm not in a hurry to push those limits, myself!)

BOB CHILDS has been a kite fiend for nine years and manufactures kites as It's a Breeze Kite Co. in Boulder, Colorado.

What is IFOSK? (International Friends of Small Kites)



IFOSK is a club in formation, a loose "company" of friends around the world who like to make, fly, collect or just read about small kites. IFOSK will maintain contact among members by issuing a simple newsletter with drawings, diagrams, photos, etc. IFOSK will participate in exhibits. IFOSK will stimulate exchange of small kites and ideas on the theme. The language of IFOSK is English, but IFOSK will promote translation to and from other languages.

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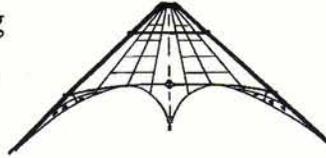
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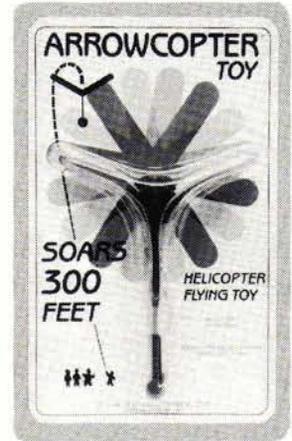
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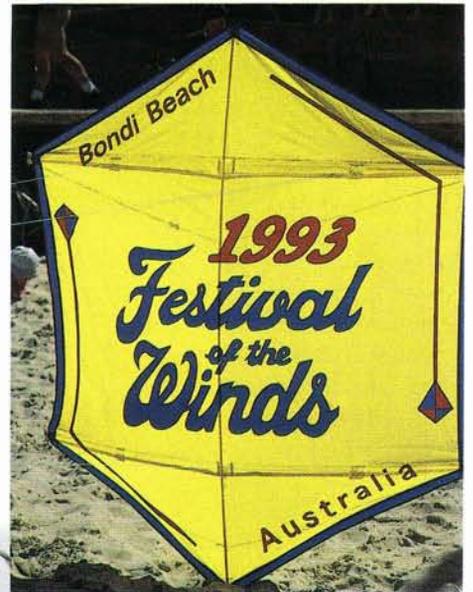
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Late BLOOMER Down Under



Above, logo rokkaku made by Anne-Maire Parrie and Arista Markou of Adelaide. Left, Lynn Vickers of Melbourne with her keeled star. Below, cathedral window by Yvonne de Mille of New Zealand.



**The 16th Annual
FESTIVAL OF THE WINDS
Bondi Beach, Sydney, Australia
10–12 September, 1993**

**Article & Photographs
by SIMON FREIDIN**

CAN A KITE FESTIVAL CHANGE DRAMATICALLY? Can it perhaps even make a quantum leap in its image from a “minor” event to a “major” one?

Look at Australia’s most-established kite event, the Festival of the Winds. It had long been a poor cousin next to the dazzle of other international kite festivals. Not only was it located on the other side of the world from most kite travelers, but it had suffered from a lack of decent funding and, at times, the backing of local authorities.

But in 1993 the Malaysian Airline Systems and Tourism Malaysia decided that they would become the sole sponsors of the event. That meant that the Australian

Kiteflyers Society could invite some international guests to give depth to the show.

And they chose their company wisely: Martin Lester (England), Philip McConnachie from Peter Lynn Ltd. (New Zealand) and George Peters (United States). In addition, in what would be a novelty among big kite festivals, they helped pay the costs of some well-known “local” kiteflyers, including Australians Helen Bushell, Tony Wolfenden, Michael Alvares and Neil Taylor. Considering



The most overlooked part of kiteflying is the grounding. Without line tension the kites would be as useless as a newspaper blowing in the wind.

Most of us use our bodies as counterweight, holding on for hours sometimes, either for the thrill of the tugging line or for the wounds it inflicts. My pleasure at festivals comes not from standing out there with one line in hand, but trying to see how many kites I can get up in the sky at once in the smallest possible space. Don't ask me why, I just like the look of it.

This calls for some creative anchoring systems. The fence posts are never in the right place. At festivals the ribbon posts separating the kitefliers from the kite admirers sometimes pull out, causing damage down the field if kite and fence go tumbling.

One anchor that I have used most

often, especially with heavyset bystanders, is the "Could-you-hold-this-a-minute"-and-walk-away tactic. I rather like that helpless look they get on their faces.

I use stakes at most grassy flying fields. I don't like to, but there's often no choice. Stakes are difficult to pull out and reposition when the wind shifts. I also have to carry a hammer with me at all times. (This comes in handy as protection during rokkaku kite battles.)

The anchoring system I have found works best is the good old sandbag. The only place you can use sandbagging effectively is on a beach. There's little use in lugging sandbags to a grassy field. I filled my many gear bags with sand to anchor my entire menagerie of kites. The first

SANDIMALS

wandering sandbag
kite anchors

designed, written &
illustrated by
GEORGE PETERS

thing I noticed was how the longish and colorful bags looked just like big slugs. When the winds were strong my sandbags drifted across the beach, leaving long snake trails behind.

I wasn't able to let the idea go and my sketchbook of kite ideas started to fill with sandbags. Slugs to snails to snakes to lizards. I liked the lizards the best and made one for the beach of Bondi in Australia. I filled the lizard mouth with sand and secured it by a pull cord, then attached that to the kite spool. Worked great! I liked the way the head cocked the eyes skyward as the kite pulled and lifted. I would reposition the thing just by dragging it by the long tail. My lizard and I turned quite a few heads.

The first one led me to make another with jaws so that as the kite pulled, the mouth opened menacingly. Children loved them and sat on their backs patting them and watching the kites high overhead.

What next? Sand alligator bags? A handbag (pointing a finger)? A bug-bag? A rising cobra? A small dragging child? A sandman? I expect to see some at the next beach festival.

yard-deep band of white sand that stretches around a bay for two and a half miles. A raised asphalt promenade attracts skaters, joggers and walkers. Immediately behind the promenade is a grassy open park which on kite day is host to stalls selling kites. Behind the park is a skyline of hotels, shops and restaurants. The festival organizers rope off about 300 yards of the beach, and on a sunny day the promenade is lined with spectators who sit all day to watch.

At this time of year, the Bondi Pavilion, a crafts and performing arts center, brings wandering musicians and dancers to the spectacle. Because 1993 was the International Year for the World's Indigenous People, Aboriginal dance and music was a feature of this year's performances. The pavilion also hosts a week of kitemaking workshops prior to the festival. This year's guest teacher was Michael Alvares.

Like all kiting events, this one depends on the weather. A sunny day with ocean winds makes it perfect for single-line kites. But when the winds come from inland, the turbulence and rolling thermals can make it near impossible to keep any one-liners in the air, and the stunters come into their own. This year was perfect for single-line display, with three days of ocean breezes.

The festival starts on Friday with a media day, when the local newspapers and television stations come to photograph and interview the kitefliers. I flew into Sydney that morning and caught a taxi direct to the beach, to see a blue sky brought to life by a host of George Peters and Martin Lester kites. The day was a long and casual fly, a chance to greet old friends.

In the park behind the beach, 60-meter-high (about 200-foot) floodlights had their own story to tell. Draped from the top of one of them, a 60-square-foot parafoil, firmly caught by its bridles, brought history to the event. One of the other light poles was already known as Ted's Pole, in honor of the final flight of Ted Cole's (President of the AKS) best-homemade winner at the 13th Festival of the Winds. When a TV crew asked Ted to launch the kite for a final shot, it was snarled by the pole, and remained up there for six months before the council crew came along to change the halogen bulb. Its neighboring pole took the honors this year and in tribute to the kite's owner, Mark Olivier of Mount Eliza, Victoria, was promptly named Mark's Pole. (This kite was not to remain there for six months: it was taken down by the fire brigade on the Monday after the festival.)

We enjoyed some firsts at this festival. One was the inaugural flight of a giant platy-

that some of them had to travel a distance equivalent to crossing the continental USA, the sponsorship was well appreciated. In addition, the four-man Crossline stunt kite team from Malaysia attended. The effect

was to put a solid wall of kites into the sky.

The site could not be better: a classic Australian surf beach. Situated on the south Pacific Ocean coastline about 20 miles south of Sydney Harbour, Bondi's beach is a 100-

pus from Peter Lynn Ltd. Unfortunately Peter had commitments in Europe, so for the first time in several years he was not there in person. Philip McConnachie launched the 38-foot inflatable green and gold platypus into the sky. The platypus is a native Australian marsupial which dwells in and around streams, grubbing in the sediment with its duck bill for insects. The detail of the kite caught its bill, clawed hands and feet quite accurately. However, the kite had not



Huge lime-colored Platypus by Peter Lynn of New Zealand, at launch.

yet been quite tamed from its wild existence, and had a propensity to nose-dive into the sand in search of a meal of kite-flyers.

Also on first release was a new George Peters concept: the wandering anchor for beach kite festivals. His first effort, a lizard sandbag (see sidebar opposite) built in Martin Lester's Bristol workshop just before George headed to Australia, caught everyone's imagination. The kite lifted the lizard's head, and when a very strong gust of wind caught the kite, the anchor slithered, lizard-like, across the sand. George named it Sal-Meander.

George was travelling with a variety of plastic reptiles—lizards, geckos, a frog and a winged pteranodon—and pulled them out at various times to decorate meals. But George made our tables come alive when he unloaded onto them colored paper, bam-

Continued on page 51...

VISIT AUSTRALIA!

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Late Bloomer Down Under

...Continued from page 49

boo and cane sticks, glue sticks and self-adhesive dots, and turned the waiting time into a kite or paper airplane-building event. Produced in paper by Martin and himself were a ten-inch dragonfly (later auctioned at the banquet), a 12-inch Lester's Legs kite, an eight-inch box kite and a two-inch cigarette-paper stickless delta.

The festival Saturday is an open all-day fly, with a minimum of organized activity. The one exception this year was a fighter kite competition, which I unwisely entered. After managing to tangle with every kite within a 200-yard radius, and failing to perform any of the required skills (horizontal passes left and right, spins left and right, knocking over cups mounted on a pole and landing within a pegged-off area), I was told by the judges that if they ever ran an innovative event they'd be in touch with me. I spent the next 15 minutes untangling the mess of line I'd created.

That night the dinner was highlighted by a Dutch auction with time limits on the bids. Here a two-dollar bid made just before the time expires can fetch you a two-hundred dollar kite. The main attraction was a five-foot rokkaku, made and decorated with the festival logo by Arista Markou and Anne-Maire Parry of New Generation Kite Factory (Adelaide, South Australia). Unfortunately, the kite missed a chance to fight its inaugural battle: stiff winds on the final day of the event led to the rokkaku challenge being cancelled—there was too great a risk of the kites sailing off over Sydney.

Competitions are part of the Festival of the Winds, and the prizes are chosen especially for kitemakers. The winners take home Malaysian pewter tankards and clocks decorated with *wau bulan* (native Malaysian kites), and kitemaking materials such as rip-stop fabric and Spectra line. The maker of the best homemade kite collects a trip for two to a kite festival in Malaysia. This year's winner was Laurie Hayes from Sydney with an impressive nine-foot-wingspan cellular kite.

The professional kitemakers are recognized in an exclusive category, President's Choice, where the AKS president simply chooses the kite he likes best. This year's standout winner was Yvonne de Mille from Christchurch, New Zealand.

On the final day of the festival, the winds stiffened and the display changed markedly. Large soft kites became the order of the day. David Chandler launched his Sutton Flow Form, and hung signal flags from the line to spell out the letters of "Festival of the

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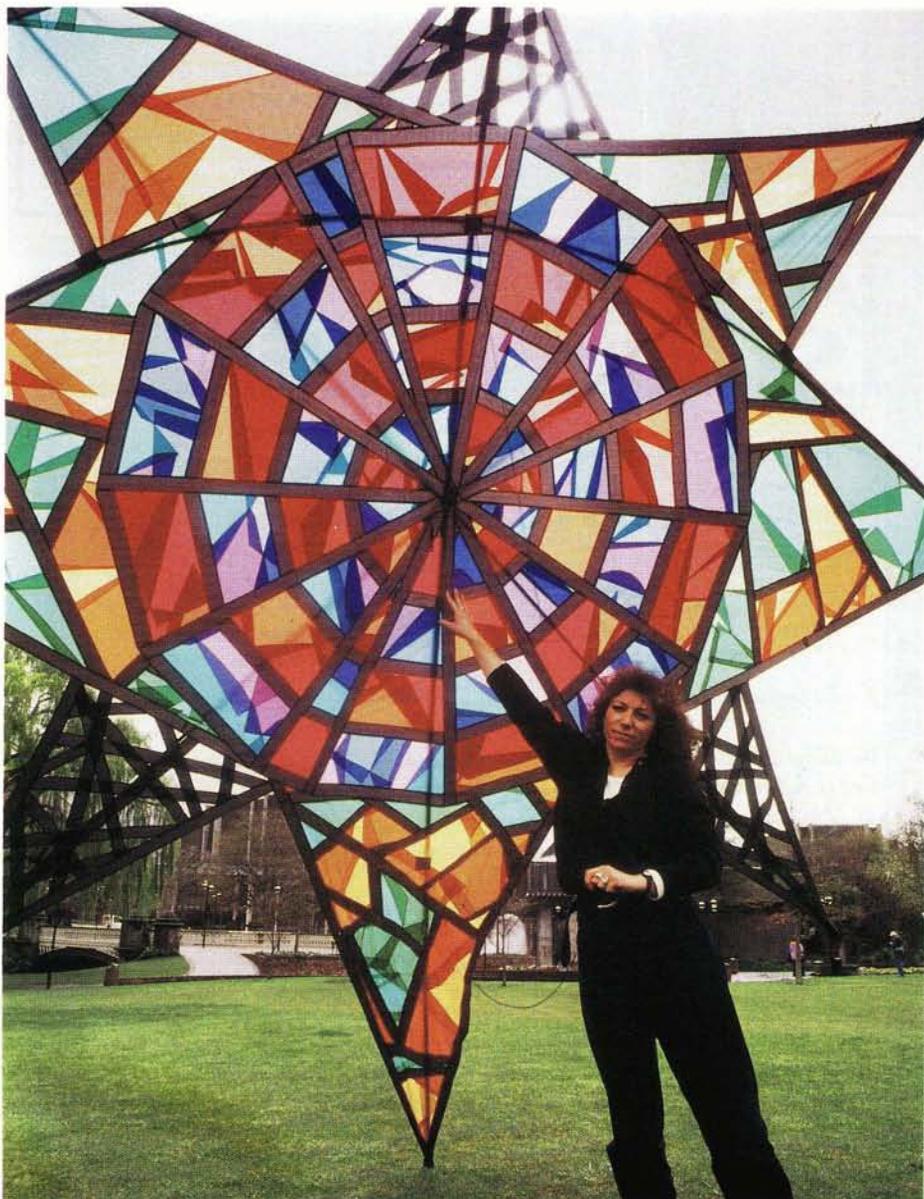
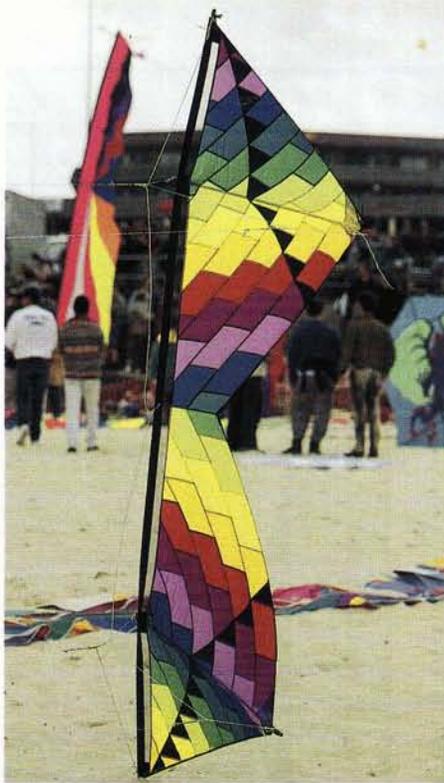
...Continued

Winds." Spinners and windsocks abounded. The cool Pacific winds prevented viewers from lingering. Though the usual crowd of 30,000 was in attendance, the spectators kept moving rather than settling on the promenade wall.

The next day we enjoyed a ferry ride across Sydney Harbour and a grand farewell lunch at Bondi Beach. All too soon it was time for our plane rides home.

It had been a fine event, satisfying in itself and good for bringing new kiting importance to Australia. We look forward to an even bigger Festival of the Winds at the 17th annual, September 9 to 11, 1994. ◇

Right, an embellished Revolution made by Cameron Fraser of Melbourne. Below, Yvonne de Mille's striking eight-pointed ripstop star.



PHOTOGRAPH COURTESY YVONNE DE MILLE

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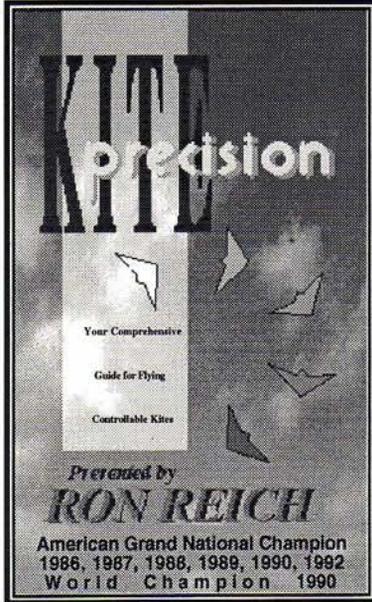
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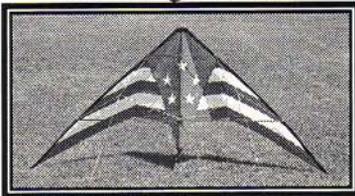
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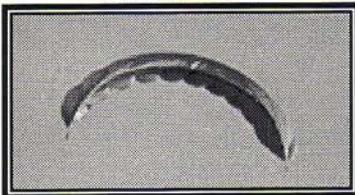
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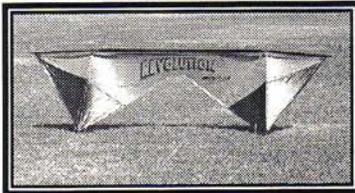
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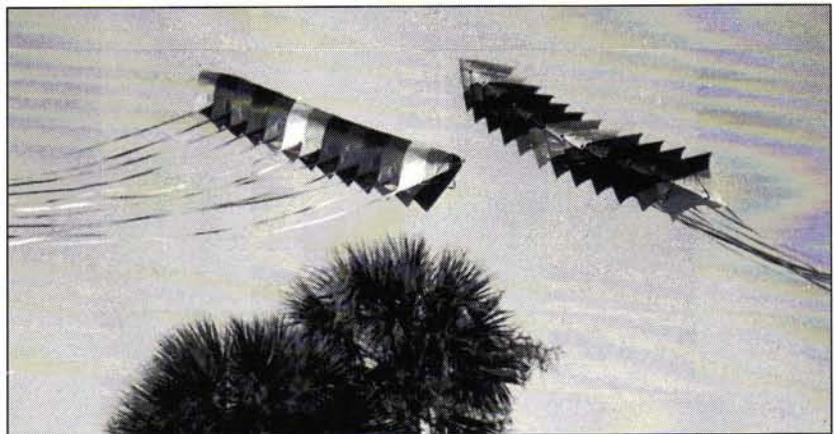
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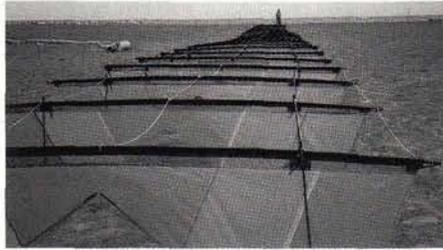
Quads Trained

"Flyin' Brian" Check of Butler, Pennsylvania flew a stack of 41 Rev-II-style kites on Sunset Beach at Presque Isle State Park near Erie, Pennsylvania on September 25, 1993.

Brian had previously flown a stack of 24 of the kites at Sunfest, Ocean City, Maryland in 1992. During that winter he decided to break his own record—and he did.

The kites formed a train 110 feet long. Brian flew the stack for 6½ minutes and made the standard right and left loops with little trouble. He used a set of 50-foot 300-lb Spectra flying lines. A harness also proved to be of great assistance because, when the flight was over, Brian had been dragged about 150 feet down the beach.

The flight was videotaped and witnessed



Forty-one Rev-II-types lined up before flight.

by six people, including members of the Fly Pittsburgh Kite Club. After the excitement had died down, Lee Sedgwick of Erie asked Brian if he would try 50 next year. Brian just laughed.

—John J. Kish
Pittsburgh, Pennsylvania

Gunn Clarified

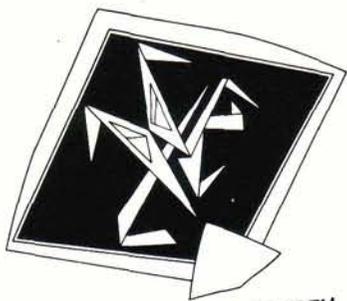
In the Winter 1993 issue of *Kite Lines*, we published reports about Ray Bethell of Vancouver, B.C., Canada and Troy Gunn of Wichita Falls, Texas. On August 20, 1993 Bethell flew three stunt kites at once for 8

hours 40 minutes at Long Beach, Washington. On September 16, Gunn flew two stunt kites at once for five hours one minute in Clinton, Oklahoma. Our report was written on the assumption that Bethell's record outclassed Gunn's, but of course they were different.

Gunn's duration record holds for two kites and Bethell's holds for three.

Guinness Updated

From time to time the editors of *The Guinness Book of Records* make changes in their entries. For their 1995 edition, they will be dropping the category Greatest Lift Achieved by a Kite (728 pounds by Bill Tyrrell on September 23, 1984 in Ocean City, Maryland) and adding the category Most Figure Eights by a Stunt Kite in One Hour (still holding at 2,911 by Stu Cohen on September 24, 1988, in the same famed Ocean City). This change was not suggested by *Kite Lines*, but maybe a little variety will add spice to kiting. ◇



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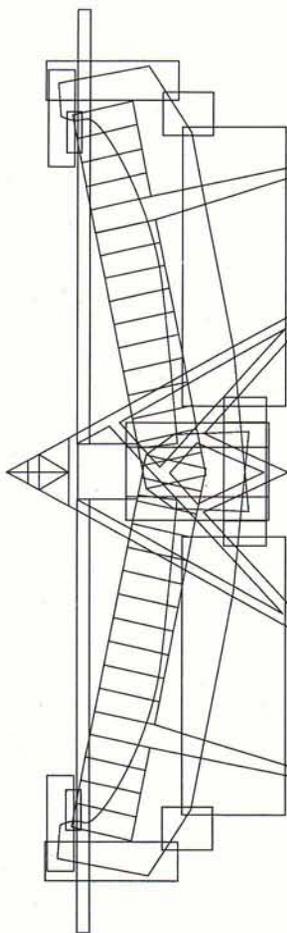
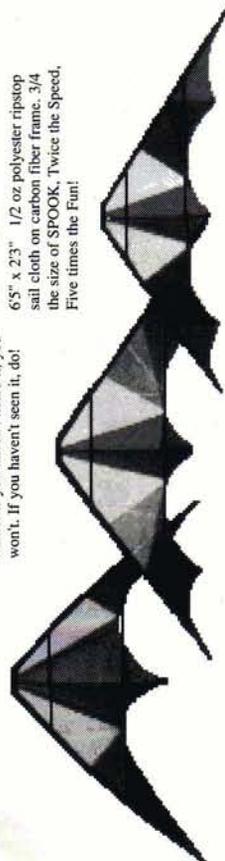
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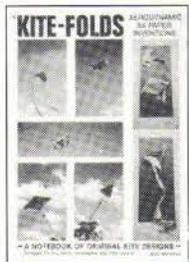
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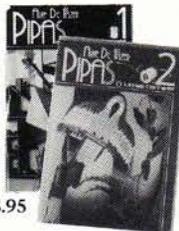
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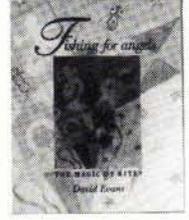


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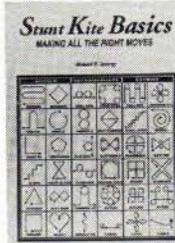
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CANADA continued . . .



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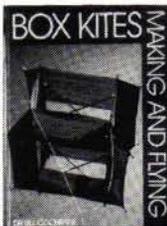
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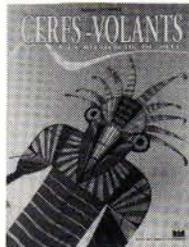


ENGLAND continued . . .



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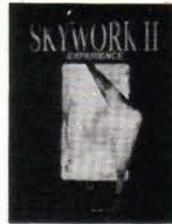
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GERMANY continued . . .



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From ITALY . . .



Aquiloni (Kites) by Guido Accascina, in Italian. A mini encyclopedia, includes theory, plans, techniques, sources. Some color. Latest edition in standard pocket book format. Softcover, 256 pp., now \$16.95



Aquiloni Acrobatici by Cristina Sanvito and Giancarlo Galli, in Italian. The first Italian stunt kite book is well organized and covers all the basics and more. Graphics and drawings are neatly done and clear. Includes a brief history, safety, basic-to-advanced techniques and maneuvers plus a valuable *glossario* and better-than-average bibliography. Softcover, 141 pp., \$19.95

From JAPAN . . .



Tezukur Omoshiro Dako Nyumon (A Primer of Interesting Handmade Kites) by Eiji Ohashi, in Japanese. Both traditional Asian kites and modern designs are among these easy-to-make figure and cellular kites plus Ohashi's famous arch train. Color photos, drawings, details. Softcover, 100 pp., \$26.95

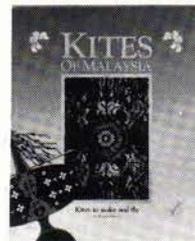
JAPAN continued . . .

Bessatsu Bijutsu Techo (Fine Arts Journal), in Japanese. Originally a 1982 issue of an art journal devoted to kites, now published as a book. Thick and substantial, it features over 300 color photos showing great detail and many techniques. Also contains drawings and articles by well-known Japanese kite authors. Softcover, 216 pp., \$29.95



From MALAYSIA . . .

Kites of Malaysia: Kites to make and fly by Wayne Hosking, in English. The only convenient source of plans for 10 varieties of Malaysian *wau*. Great full-page photographs, brief background and reasonable description of methods. *Limited supply.* Softcover, 39 pp., \$9.95



From The NETHERLANDS . . .

Stunt Kites to Make and Fly by Servaas van der Horst and Nop Velthuisen. Covers all aspects of the sport. Includes detailed, clear plans for 10 different high-tech maneuverable kites, some with novel touches. Excellent quality drawings and photographs, several in color. Well organized and printed. Softcover, 96 pp., \$21.95



NETHERLANDS continued . . .



Kleine Papieren Vliegers (Small Paper Kites) by Harm van Veen, in Dutch. A very original, colorful little book with clear and detailed plans for 10 artful miniatures plus a tiny reel. Complete techniques, even splitting bamboo. Softcover, 32 pp., \$5.95

From SOUTH AFRICA . . .



Kites: 24 Designs by Izak C. Rust, in English. The first kite book from South Africa. Good scale drawings and color photographs. Includes the South African fishing kite. Tips on frames, tails, sails, knots, reels, bridles and flying. Annotated bibliography. Softcover, 48 pp., \$11.95

From SWITZERLAND . . .



Drachenreise (Kite Journey) by Ruedi Epple-Gass, in German. Interesting black-and-white book. Countries explored (some visited and others researched) include Turkey, Vietnam, Dominican Republic, and spots in the South Pacific, Latin America and Europe. Political overtones. A few drawings of biodegradable kites, poems and flying tips. Softcover, 125 pp., \$26.95

The Kite Lines Bookstore . . . Continued

From The UNITED STATES . . .

The Penguin Book of Kites by David Pelham. Called "The Bible," first published in 1976 and still recommended for all kitefliers. Plans for more than 100 kites plus solid, well-researched and -written aerodynamics and history. Color in half the book. Index and bibliography. Softcover, 228 pp., \$14.95



The Stunt Kite Book by Alison Fujino and Benjamin Ruhe. Covers background, personalities and introduction well; treats nuts-and-bolts somewhat sketchily. Many black-and-white photos and drawings and a chart of 80 brands of stunt kites listed by skill level. Softcover, 110 pp., \$8.95



NEW! *Kite Precision* by Ron Reich. A strong foundation in stunt flying from one of the most celebrated fliers in the country. Fully detailed explanations of maneuvers Reich started that are now basic. Excellent sections on the Revolution and Flexifoil flying. Good introduction to team flying and choreography. Self-published with low-resolution photos, but lots of them. Touches of humor. Softcover, 182 pp., \$14.95



Art That Flies by Tal Streeter and Pamela Houk. Anthology of unusual kites from 1990 Dayton (Ohio) Art Institute exhibit, featuring works by three noted artists. Optical illusions, environmental works, interviews, interesting bibliography. No plans. Softcover, 139 pp., \$14.95

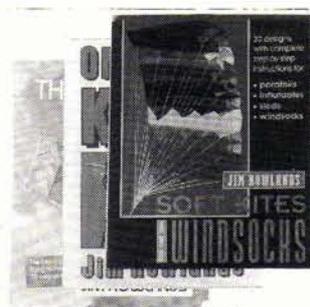


The Art of the Japanese Kite by Tal Streeter. Rare profiles of master kite artists of Japan sensitively interviewed in 1971-72, just before the waning of their traditional arts. Includes 130 photos (52 in color). No plans, but some background on Japanese-style kite building. A rich contemporary history and a true joy to read. Softcover, 181 pp., \$24.95

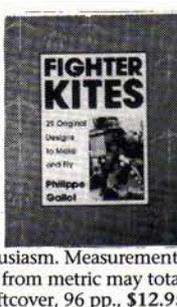


Books by David Gomberg are "homemade," lacking polish and photographs, but are useful to read: **New edition!** *Stunt Kites!* The first book on the subject. Thorough coverage of the basics plus advanced techniques. Maneuvers, tips, information and proven advice from 20 well-known sport fliers; lots of safety pointers. No kite plans or brand names. Softcover, 88 pp., \$11.95 *The Fighter Kite Book!* A goodly amount of information, mostly correct, about fighter flying. Though flat in tone, it's a useful starting source. Contains plans for a basic fighter. Beware drawings of bridles. Softcover, 74 pp., \$8.95

Books by Jim Rowlands, though U.S.-published, contain British quirks: *Soft Kites and Windsocks*. Same as British *Kites and Windsocks*. The best from Rowlands so far. Plans for 11 kites (including whale and frog), 5 windsocks, 5 drogues and 2 bags. Softcover, 104 pp., \$14.95 *One-Hour Kites*. Same as British *Kites to Make and Fly*. Plans for 25 basic beginner's kites. Softcover, 95 pp., \$14.95 *The Big Book of Kites*. Same as British *Making and Flying Modern Kites*. Plans for 36 kites. Softcover, 127 pp., \$12.95



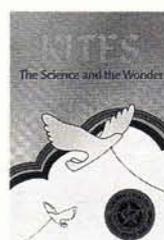
Fighter Kites by Philippe Gallot. Plans for 29 kites, tips on flying, tools, materials, games and accessories. Clear illustrations, adequate instructions, plentiful enthusiasm. Measurements converted from metric may total incorrectly. Softcover, 96 pp., \$12.95



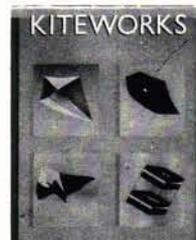
The Ultimate Kite Book by Paul and Helene Morgan. If it weren't for the exaggerated title, this book would offend no one. Done with great color to create excitement. Lacks identification of kitemakers. Extensive photographs showing flying techniques. About six good kite plans. Hardcover, 88 pp., \$19.95



Kite books by Wayne Hosking vary in appearance but suffer in the writing: **New softcover edition!** (*new cover only*) *Kites*. Lavishly printed book of beautiful kite photos. Some good research on Asian kites. Kitemakers are unidentified. Absurd appendixes; 120 pp., \$15.95 **NEW!** *Kites to Touch the Sky* by Wayne Hosking. Self-published. Has plans for 32 plastic kites, simple drawings, no photographs. Softcover, 96 pp., \$9.95



Kites: The Science and the Wonder by Toshio Ito and Hirotsugu Komura. One of the few efforts to be scientific about kites. Uneven translation from the Japanese. Softcover, 160 pp., \$12.95

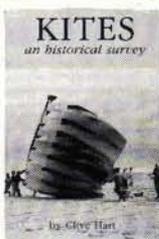


Kite Works by Maxwell Eden. Revised edition. Fifty kite plans from respected designers. Detailed drawings plus tips, accessories and (un)related stories. Kite paintings, a few photos. Softcover, 287 pp., \$14.95

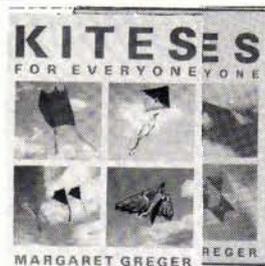
Flight Patterns by Leland Toy, 2nd edition. Solid tips and easy plans for 8 kites from a well-remembered kiter. Includes a rotor of foam meat trays and a Mylar fighter. Unpretentious, error-free. Softcover, 36 pp., \$9.95



Kites: An Historical Survey by Clive Hart. Revised, second edition (1982). Invaluable reference work with many black-and-white illustrations and photographs. Fascinating, readable, in-depth research in early kiting. The most extensive kite bibliography in print. No plans. Softcover, 210 pp., \$15.95



Kite books by Margaret Greger are clear, wise and reliable, ideal for beginner, expert or classroom: *Kites for Everyone*. Many good kite plans, variations and accessories, plus tips and techniques. Second edition. Softcover, 136 pp., \$12.95 *More Kites for Everyone*. Some old kites, some new kites, plus more tips. Plans for 17 kites from simple to complex. Softcover, 59 pp., \$9.95



Super Kites III by Neil Thorburn. Many designs for kites of proven performance. Tested, creative building techniques using mostly plastic bags and wooden dowels. Color photographs brighten this "completely handmade" book. Softcover, 123 pp., \$8.95

25 Kites that Fly by Leslie Hunt (*not shown*). Reprint of the 1929 original. Plans for old-fashioned kites (shield, yacht, elephant, etc.) using flour-and-water paste, paper and wood. Historical data and photos. Softcover, 110 pp., \$2.95



NEW! *The Usborne Book of Kites* by Susan Mayes. Cute, colorful collection for kids. Six easy kites, with clear and fully illustrated step-by-step instructions. All measurements given in both metric and U.S. equivalent. Good introduction to materials, wind and flying. Many tips included. Softcover, 32 pp., \$5.95

Make Your Own Kite (new kites) by John W. Jordan (*not shown*). Plans for nine original kites using many unusual, easy-to-find materials. Limited supply. Hardcover, 90 pp., \$14.95



NEW! *Ski the Beach* by Stan Rogers. All you need to know about sand skinning with kites. The only book on this topic. Safety concerns explained throughout. Necessary beach conditions thoroughly illustrated. Loads of charts, including "How Wind Energy is Affected by Temperature." Homemade layout and art. Scads of black-and-white photos. Softcover, 100 pp., \$13.95

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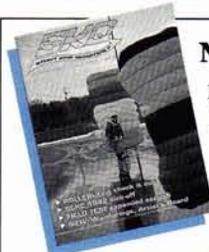
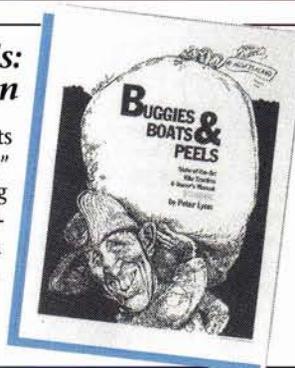
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Kites of Buriram (Thailand); Flying in Baja; Sher-Bird; Sisson Sled; Cutting Boron; Dyeing Ripstop with Kool-Aid.

SUMMER 1989 (Vol. 7, No. 3)

India's Annual Frenzy; Stunt Kite Survey; Kite Capitals of the World; Fabulous Bali; Flying Wedge; Ohashi's Arch Train.

WINTER 1989-90 (Vol. 7, No. 4)

China by Tal Streeter and Skye Morrison; How to Dye Ripstop; Modifying a Parachute; Stunting a Flow Form.

SUMMER 1990 (Vol. 8, No. 1)

New Zealand, Berlin, Washington (England); Parachute Stunter plans; Peter Lynn's Future Tech; Bobby Stanfield.

WINTER 1990-91 (Vol. 8, No. 2)

Dieppe, Montpellier, Bristol and Berlin; Stunt Kite Survey; D'Alto's Whitehead kite; Largest Eddy record.

SPRING 1991 (Vol. 8, No. 3)

Whistling Kites of China by Tal Streeter; Gomberg on Kite Pins; Angle Estimating; Wind Shot stunter plans.

SUMMER-FALL 1991 (Vol. 8, No. 4)

Pierre Fabre in Japan; Kinnaird on Rokkakus; Kocher's Obtuse Tetra; Huntington Beach scandal; Peter Malinski.

WINTER 1991-92 (Vol. 9, No. 1)

Stunting in Italy & Poland; Gubbio (Italy); Painless Parafoil plans; Painting Ripstop; Roberto Guidori.

SPRING-SUMMER 1992 (Vol. 9, No. 2)

André Cassagnes; Thailand and the Natural Fibers Festival; Christmas Island feats; Stunter Survey; George Peters.

FALL 1992 (Vol. 9, No. 3)

Castiglione, Le Touquet, Barcelona, Ostia; Arch Ribbon; Niagara Falls; Tangles; Ianuzzi's Featherlight; Kim Petersen.

WINTER 1992-93 (Vol. 9, No. 4)

Hamamatsu by George Peters; Kite Power by Nop Velthuisen, with traction chronology; Fighters by Mel Govig; Dieppe; GX-3 stunter plans; Ron & Sandra Gibian.

SPRING 1993 (Vol. 10, No. 1)

Guatemala; Java; Fighters by Ed Alden; Celebs in Paris Paint Rokkakus for AIDS; International Travel Tips; aeriels of Ireland; quad-line Propeller; Jørgen Møller Hansen.

SUMMER-FALL 1993 (Vol. 20, No. 2)

Adrenaline tour of India; István Bodóczy's artistry; Carl Crowell's Cross Deck; Oldest U.S. Kite Festival (Iowa); Kites at the Pyramids; Tony Wolfenden.

WINTER 1993 (Vol. 10, No. 3)

North Sea events (Terschelling, Scheveningen, Fanø); Southwest Kite Camp Caravan; Rendez-Vous Mondial in Canada; Sheryg's Butterflies; Wolfgang Schimmelpfennig.

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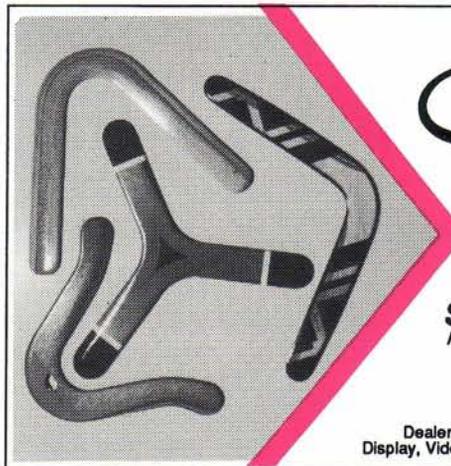
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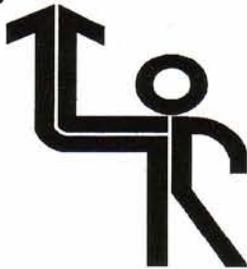
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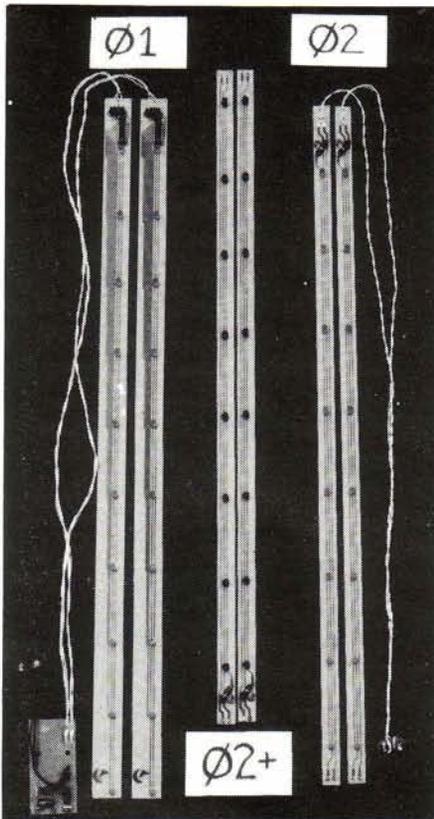
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Doug Hagaman, Steve Bernstein

Douglas A. Hagaman, admired maker of the Hagaman parafoil and flier of astounding arrays of kites and streamers at festivals around the world, died on December 20, 1993 of dysrhythmia. He was 39 years old.

A Bellevue, Washington native who had lived on the Washington and Oregon coasts, Doug moved with his wife Jody to Westport, Washington in 1989. He had worked as a technician on fiberglass sailboats and was studying atmospheric sciences at Grays Harbor College.

But Doug was best known for his kites, built to impressive size and exacting standards. He enjoyed walking the beach, observing its wildlife, visiting its lighthouses and flying his kites there. He believed the winds of the Washington state coast were the cleanest and steadiest in the world—and he had flown kites in Australia, Canada, China, England, Japan and Singapore. He was a founder of the kite conference at Fort Worden, Washington and twice a contributor to workshops in England.

Services for Doug were distinguished by his kites on the walls, flowers from England, guitar music that he loved and a variety of speakers celebrating his life. A memorial fly of Hagaman parafoils has been planned for July 2, 1994 at the Westport Windrider Kite Festival. A concrete bench usable as a kite anchor and a commemorative plaque will be unveiled July 3 on the Westport Lighthouse Trail. Contributions may be mailed to the Doug Hagaman Trust Fund, c/o Jody Hagaman, PO Box 2078, Westport, WA 98595.

Tal Streeter remembers Doug Hagaman:

Doug was a kind of ideal kiteflier for me, an adult who over a lifetime had managed to hold onto the features of childhood—so richly exemplified by a love of kites.

Kiting was the pleasure of sharing nature freely, giving form and color to the wind and producing an artistic expression, summed up on his business card, "Paint the Sky." The hours of labor, the investment and mainte-



Doug Hagaman, Westport, 1989

nance of equipment for his displays could not be fully reimbursed with money, but for Doug, I think, were repaid with the knowledge that he had done his best in making something glorious happen in the sky.

I admired the fact that Doug continued to make Jalbert-style parafoils with full credit to the inventor. At the same time, he was widely recognized for having refined the construction of the traditional parafoil. Doug's kites flew without a ripple anywhere on the surface. All the elements were in perfect alignment, the cloth grain and stitching pulling evenly. A Hagaman parafoil, designed and made by Doug himself, was a faultless accomplishment.

Doug and I worked on several projects together, including our several-mile-long Flying Red Line (begun with William Tyrrell). In later years, Doug was responsible for keeping the project alive. We learned new things with each effort, but now, without his participation, its successful realization seems problematic. Still, I would like very much to complete it—and perhaps I will—in remembrance of Doug.

Doug was one of my kite anchors, a great personal resource. I relied on him. He never disappointed me. I loved him. I miss him dearly. The kite community is greatly diminished by his absence.

Stephen John Bernstein, loyal participant in the Smithsonian Kite Festival, died quietly of cancer in Arlington, Virginia on March 25, 1994, at age 86.

A retired Air Force engineer, he designed and made a variety of original kites, often based on traditional Asian models. Usually he used bamboo or

wood and painted cloth to make intricate centipedes, birds, stars, rokkakus and other kites, often featuring revolving gold eyes and gift ribbon tails. Plans for his Chinese bird kite were published in the Spring 1979 *Kite Lines*.

At kite festivals, Steve would invariably win an award—if not for craftsmanship or the oriental category then at least for the senior citizen class, which he accepted grudgingly, saying it was like a consolation prize. His natty appearance, energetic friendliness and fast quips on the field belied his age.

Steve and I always took reciprocal photographs of each other at local events. I was looking for him at this year's Smithsonian on March 26, not knowing he had died only the day before. Steve's wife Sylvia, in poor health in recent years, was unable to inform kites of his death. Members of the Maryland Kite Society hope to keep Steve's kites and fly them in future years at the Smithsonian.

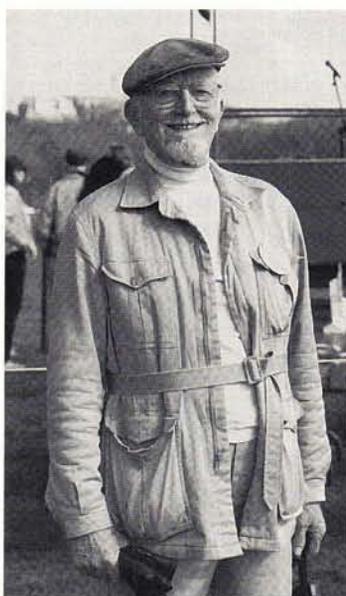
I remember a telephone conversation with Steve in 1987. He said, "What keeps me alive is that I have one more kite to build. So I keep putting it off for fear that when I make it I won't be around much longer."

—Valerie Govig

Marjorie Harrison, wife of Hugh Harrison, died at age 71 on October 14, 1993. Longtime kiter Hugh A. Harrison, active member of the British Columbia (Canada)

Kitefliers Association and lifetime member of the AKA, was strongly supported in his enthusiasm by Margie. With Hugh, she traveled to kite events in Asia, Oceania, Europe and the U.S. Her social generosity and kite skills helped build the BCKA. —V.G.

Emma (Billie) Jalbert, wife of the deceased inventor of the parafoil, Domina C. Jalbert, died on February 27, 1994 after a stroke in West Palm Beach, Florida. She had celebrated her 91st birthday on February 10. Several kites attended her funeral. —V.G.



Steve Bernstein, Smithsonian, 1991

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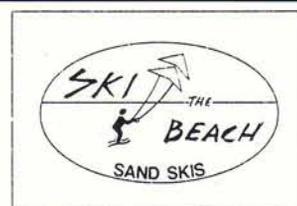
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News, Rumors & Miscellany

BBETTER THIS YEAR: INDIA'S fabled international kite festival in early January. Held in Ahmedabad, mecca of rooftop fighter kite-flying, it drew 39 visitors from nine countries. The government plans to make the event bigger every year. For 1995, they are talking about a *stunt kite competition*. (Is this progress?)

RECOVERING FROM MAJOR surgery is Bob Ingraham, 83, in Silver City, New Mexico. His wife Hazel knew the founder of the AKA was on the mend when he started talking and joking again. Write to Bob at 315 N. Bayard Street, Silver City, NM 88061.



CANADIAN KITERS ARE writing lots of letters these days. Why? Canada Post has just issued a preprinted prepaid aerogram with a big delta kite in the postage corner. Sending one from Ontario, Ilene Atkins said, "They have done hang-gliders... This is the first kite that they've done." Small print inside the envelope credits the kite to Montreal's Claude Thibaudeau.

ATOWN CALLED KITE? YES, two of them—Kite, Georgia and Kite, Kentucky. The former enjoys the Kite Elementary School, Kite Mercantile and Kite Church of God. But in Kentucky, the town has the advantage of a location next to the town of Topmost, which it joins in the Kite Topmost Volunteer Fire Department. (You can't make up stuff like this.)

ROYAL INTEREST IN KITES? Wilf Proctor of Kirkcudbright, Scotland, writes: "On the 30th of June, 1993, her Majesty the Queen and Prince Philip, the Duke of

Edinburgh, visited our small town, Kirkcudbright. They came to open the Tolbooth, an historic 17th century building which was recently refurbished as an art and craft center.

"After the opening ceremony, the Royal party toured the building. I was making kites in one of the workshops and was honored when the group stopped by to examine my work. The Queen was interested in the materials used, while the Duke made a beeline for my biggest kite, a Facet. I was pleased to point out the expanding interest in the sport, the development of the kite manufacturing industry and the huge increase in the number of retail outlets, all of which have taken place in recent years despite the recession.

"The Queen then asked if I was 'in the business of kite manufacturing.' I replied that I look upon my kitemaking more as an art form and that such sales as I make are through displays of our local craft association rather than stores.

"After the Queen and the Duke departed, it took hours for me to come down to earth again. I'll never forget this delightful experience!"

WATCH FOR IMPORTANT kite exhibits opening soon:

- **August 11, 1994** and running three months, a large show of kites as art, including European and Asian craft as well as designs by noted local artist George Peters. Site: the high ceilings of the lavish, light-filled new Arvada Art Center in Arvada, Colorado.

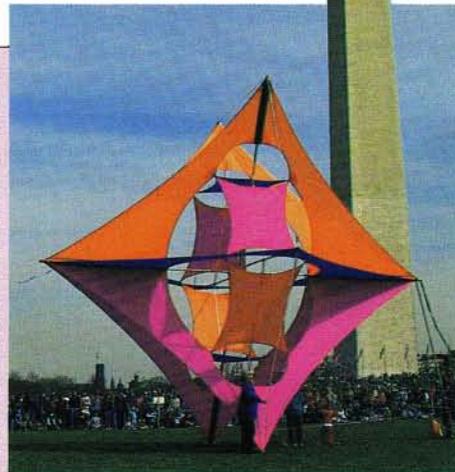
- **Late 1994 or early 1995**, a solo exhibition of works by Dr. Skye Morrison. Site: the Russell Gallery in Lindsay, Ontario, Canada.

- **Sometime in 1996**, "How Things Fly," an educational exhibit. Site: the National Air & Space Museum, Smithsonian, Washington, D.C. Kites will be included, probably in a style similar to the "Flying for Fun" display in 1978. That exhibit lasted only a year. The new one, rumor has it, will be larger and will be up for five years.

A MAJOR ATTRACTION At this year's Smithsonian Kite Festival in Washington, DC was the 30-foot nylon and aluminum Urban Wind Star by Joseph Huberman of Raleigh, North Carolina.

But the kite didn't fly under the conditions of the day. In fact, it had never flown. The Star was nevertheless elegant in repose, and had arrived as a celebrity from Raleigh. There it had been suspended over the city square on New Years Eve. At the 19th floor level of the tall buildings, turbulence kept the Star in gentle motion among the searchlights, band music and smoke from fireworks.

Huberman's plan was to really fly the kite at the Smithsonian and claim it as Largest Facet Kite. A debate ensued over whether sails radiating from the kite's center were a sufficient fit with the classic definition of externally braced Facet or if the kite might better stake its claim simply as Largest Box. The question is moot until the Urban Wind Star flies.



FROM THE

Japan Kite Association President Masaaki Modegi: The sad passing of the last Edo-dako kite-maker in Tokyo, Teizo Hashimoto on November 17, 1991, broke a link with one of Japan's rich kite-making traditions. But the event did not pass unmarked. In memory of Hashimoto-san, the Japanese kite



community erected a six-foot marble memorial in Taito ward, downtown Tokyo. Mounted into it is a ceramic plaque decorated with one of Hashimoto's rabbit and wave paintings.

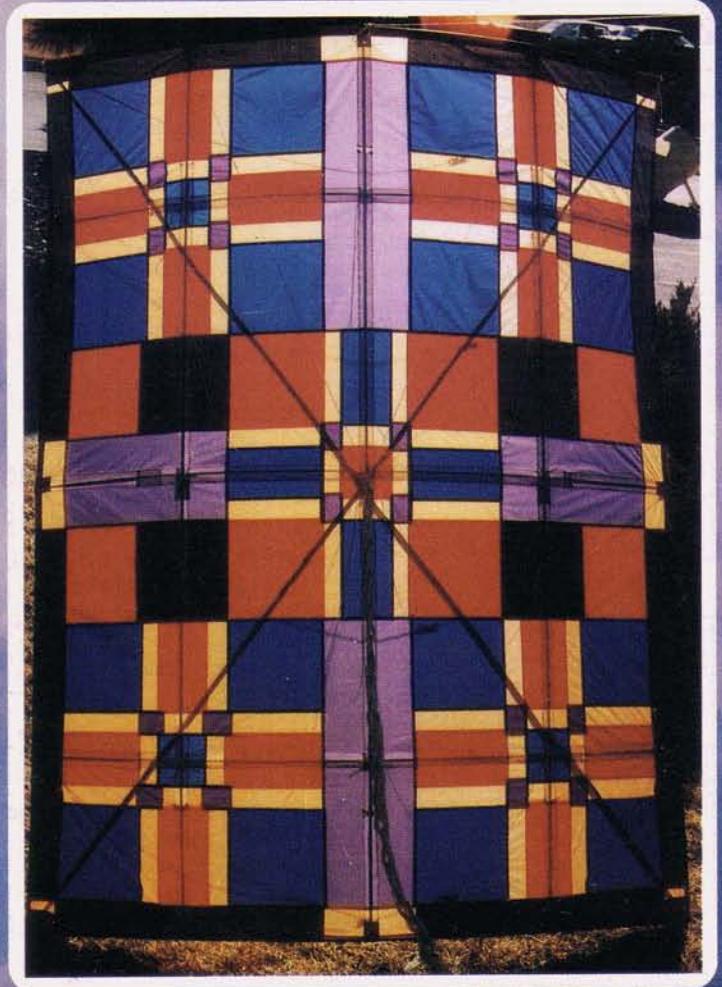
TWO SERIOUS EFFORTS ARE underway to build a new record-setting Largest Kite. Very hush-hush, but a prototype by Harry Osborne is flying well in Washington state while Bob Anderson of Dublin, California with Dave Green of Greens of Burnley in England have plans in progress for 1995.

OUR NOMINATION FOR MOST KITE GEAR EVER CARRIED ON A Bicycle goes to Larry Hoffman of Tokyo, Japan. His list includes:

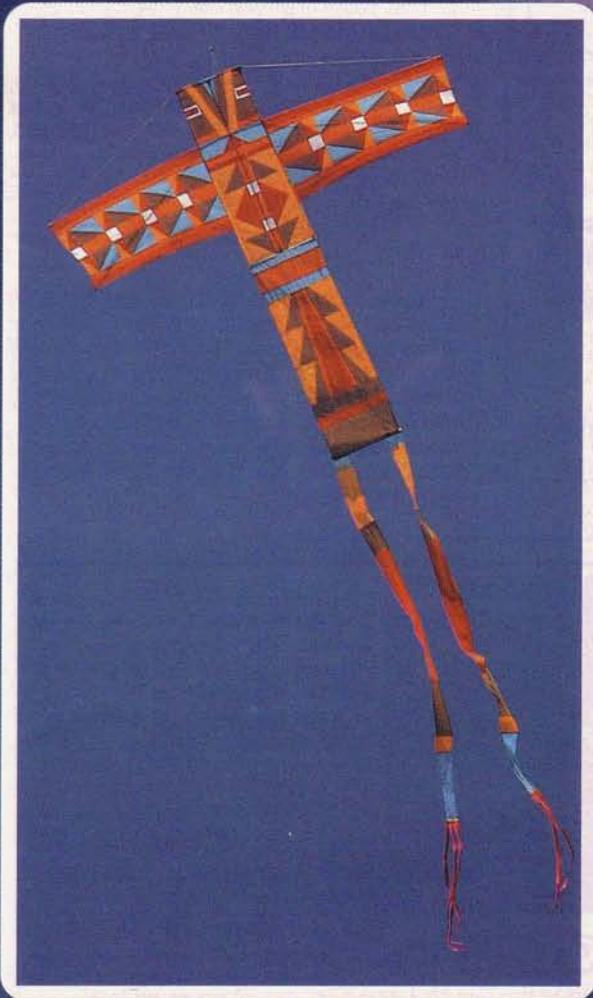


- 13 kites, ranging from a postcard Edo to a Dan Leigh delta
 - Six reels carrying line ranging from sewing thread to 250-lb
 - A mechanical device for taking aerial panoramic pictures
 - A 35mm camera
 - Two anchors for the big kites
 - A tool kit containing many tools and accessories
 - Several paper plane gliders
 - A copy of *Kite Lines*
- Larry modestly says this collection is only for a "typical outing."

Reza Ragheb



Reza Ragheb



Kitemaker: Reza Ragheb, age 60, Aurora, Colorado, USA

Occupation: Kite designer

Kite experience: Kiteflier for 17 years; kite store owner and kitemaker for 13 years

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Photographers: Helen & Reza Ragheb, Valerie Govig, Tim Maruszczak and Alex Dienst



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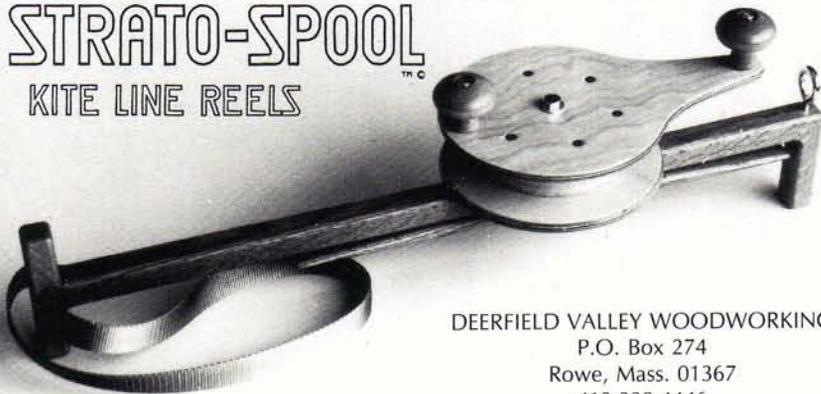
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LOST

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