

PINEY MOUNTAIN AIR FORCE

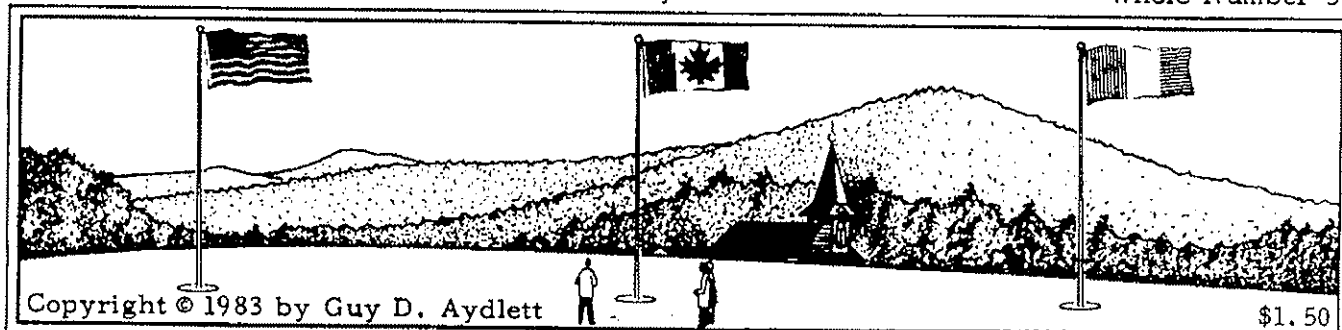
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DATA★LETTER

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LITHO IN U.S.A.

JULY, The Seventh Month, brings us three national holidays to celebrate: On the 1st, we will fly the Maple Leaf Flag to honor Canada's Dominion Day; on the 4th, Independence Day, two 5' x 9.5' American flags will be flown; and the French Tricolor will fly on the 14th, to remember Bastille Day.

Fliers should propitiate The Weather Trolls with burnt feather offerings well before the 15th, St. Swithin's Day. If rain falls on that saint's day, The Ancient Ones tell us that it will rain for forty days on outdoor kitefliers.

If chilly rains don't come, the days will be hot, and you'll see the full moon on the 24th.

On the 28th, 2348 B.C., Noah pried open the hatches of the Ark. His voyagers were all delighted to sniff a whiff of fresh air. . . .

July is also notable for being the birthday month for PMAF's DOROTHY HORNBEAM and DANA GRIMM; also for Goa's MISTAH BLUCE.

JIM CARNWATH has been located. Remember the question in DL #30, p. 4? The rotor kite inventor, aviator, kiteflier, and author is a close friend and mentor of Jack Krugerrand, otherwise known to many as AKA's Honcho of the Heights, JOHN F. VAN GILDER. According to Jack: ". . . 'Do any of our readers know Jim Carnwath?', you ask. Well, YOU just struck a vein of gold. . . ."

"I've said it before (110 times?) and I'll say it again: *Jim Carnwath taught me half of everything I know about kiteflying.* It used to be three-fourths, but I have learned a few things in the past seven years. It was seven years ago that Jim gave up kiteflying for air-

plane flying and kinda dropped out. He came up to me at the airport a couple of weeks ago when I was picking up. . . the only Eastern Bloc kiteflier known to exist by the Western world. But that's another story. . . ."

GERRY OSBORNE, Thorp Washington kiteflier and cartoonist (America's threat to Britain's John Barker), also advised PMAF: ". . . Yes — R 'Leader' [JVG] knows him [Carnwath] well. So write the ***** *****", Jack Van Gilder (AKA Head). . . ."



EXIGENCIES OF BRITISH KITEFLYING, 1799 might well be the title of this cut, reproduced in actual size from Thomas Bewick's *History of British Birds*, p. 9, Vol. II, 1st edition, 1804. (Hornbeam Archives Bewick Collection)

MORE FROM BRITAIN: Gill and Jon Bloom, editors of *Kitefliers Occasional Newsletter*, have been performing the work of a kite organization; so they have created THE KITE SOCIETY, located at 31 Grange Road, Ilford, Essex IG1 1EU (K.O.N. by air overseas: £5).

SOLID SECTION SHAPES: THEIR EFFECTS ON THE STRENGTHS OF KITE FRAME MEMBERS

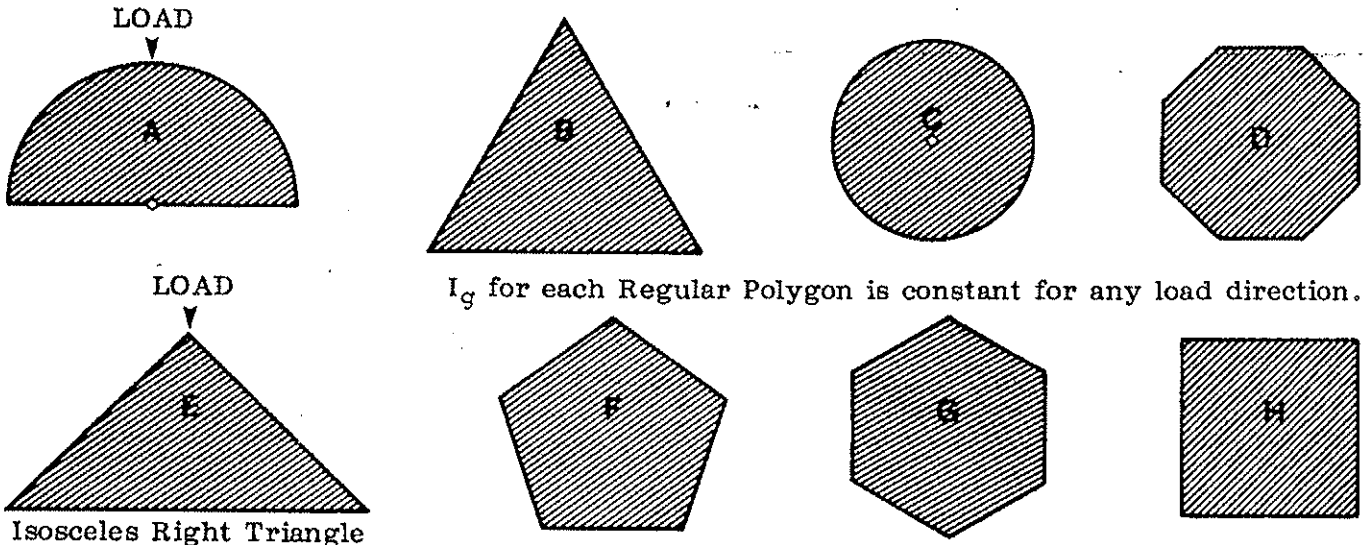
by Ben D. Beems

EVERY KITEFLIER knows that a 1 cm square spreader is stiffer—bends much less—than a 1 cm diameter spreader that is made the same length of identical material, and is subjected to identical loading. He may also know that the square piece weighs 27.3% more; a weight penalty has to be paid for increased strength.

Or does it?

Suppose the diameter of the round spreader is increased about 12.8% to make its area equal to the 1.0 cm² area of the square spreader? Is the round spreader now stiffer than the square one? Is it the same? Or is it less stiff?

The answer will be found beneath the figures that are shown below, but first play a game with the figures: Each shape is assumed to have a cross-section area identical to any other in the series; hence, kite members that employ the sections will be equal in weight if they are made equal in length and of identical material. Can you arrange the shapes in their order of increasing strength? Each is assumed to have an area of 1.0 cm²; the moment of inertia of each is given in the inverted data beneath the figures. Higher strength sections are the ones with higher moments of inertia.



EIGHT GEOMETRICAL SHAPES: AREAS ARE IDENTICAL; MOMENTS OF INERTIA (I_g) DIFFER
 Moments of Inertia (I_g) in cm⁴: A = 0.04448; B = 0.09623; C = 0.07976; D = 0.05556; E = 0.08019; F = 0.08333; G = 0.08093; H = 0.08019; Equilateral Triangle best; Square next; Pentagon next; Octagon, 3rd.

THOMAS DORTMANN, Bonn, West Germany sends this hearty boost to PMAF: ". . . First I would like to say thank you! for the ever-interesting, the very regularly printed, and the promptly delivered DATA LETTER!!

"Maybe trolls have some relations to the ever-busy (typical German) dwarfs? [Trolls and Nibelungen are first cousins —Non-ed.]

"Second (as a consequence) I would like to extend my subscription for one more year 'till August 1984. . . .

"Best wishes, good luck for PMAF, and: UP WITH KITES! —Thomas Dortmann."

*

L. MONTGOLFIER CONOVIER, Tightair, NJ: "Why is the price inflated to \$2.50 for the DL Balloon Issue?" [If we charged 25¢, would ye respect us tomorrow morning? —Non-editor.]

LYCURGUS GROONE of Dromedary Remount Station, Bumpass, VA asks: "Why do all of my Tetraflex Mark I kites fly with a cant to the left?" [Aside from the Coriolis effect, we'd guess the fault is left-hand keel-bends —N.]

*

PHOEBE B. BOEBE, Naugatuck, Connecticut exclaims: "Aha! Methinks I caught a grammatical error on page 4 of DL #31 (I never thought it would happen!)." [You did, and it did; you got us! Why not look for the seven other lapses? Get all of them right, and we'll contribute an extra \$2.50 issue to your New Canoe Canal Auction Store. —Kermud-Jinn.]

*

DAVID P. TOWN, Sea Isle City, NJ asks us: ". . . How do you become a Troll?" [Answer: Send more of those excellent aerial photos.]

"HANG LOOSE"

by Lucie Ferr*

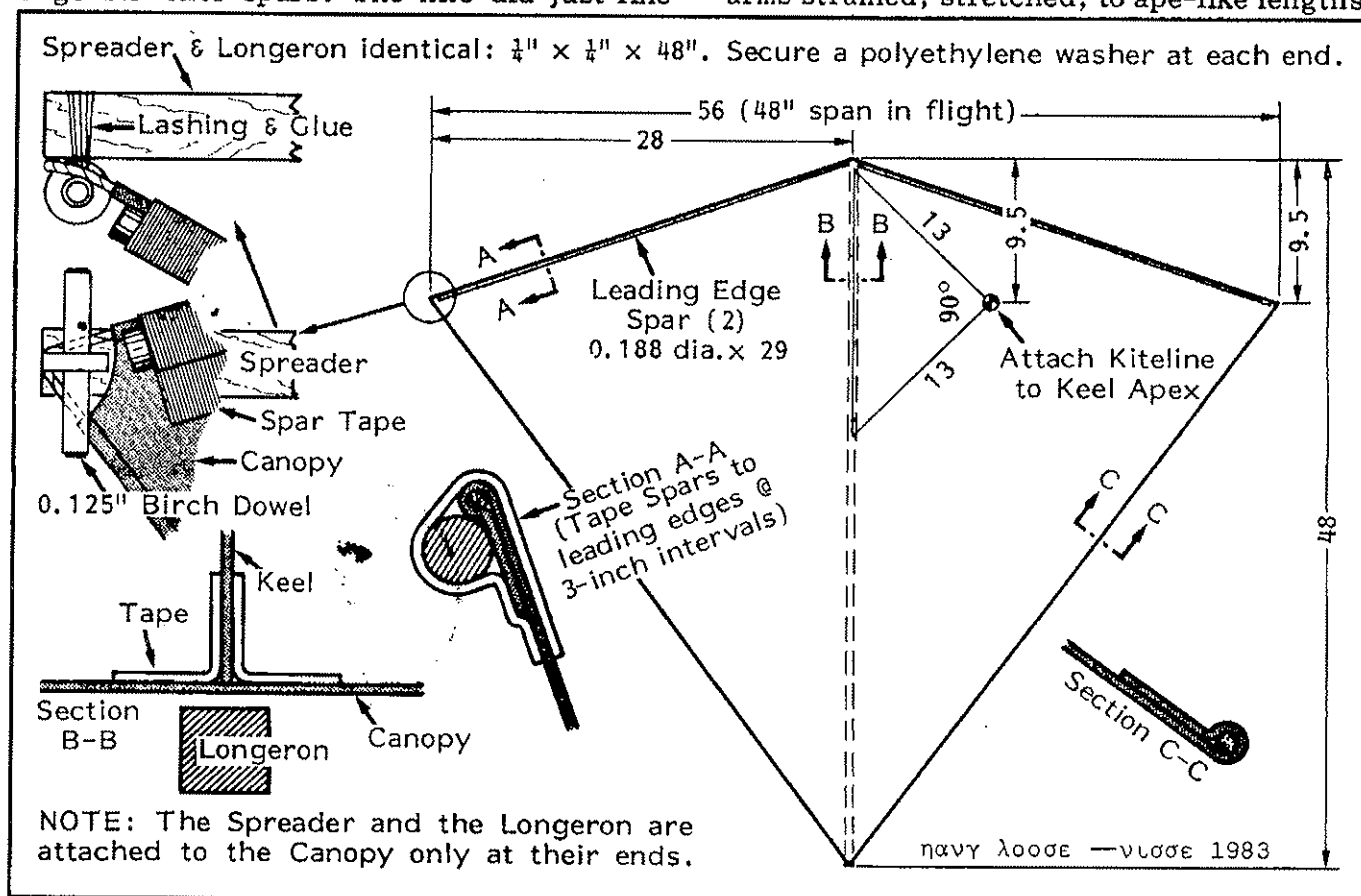
HANG LOOSE is a happy, active, articulated kite that grew from a hint tucked on page 3 of *DL #26*: "JANUARY HOMEWORK: Put a keel on your Eddy; replace the bow-spar with a short spreader."

I had no Eddy canopy available for the experiment, but did have part of a 56" wide roll of Tyvek® 14. From that roll, I made a canopy 48" high by 56" wide—9.333 ft²—with a stout perimeter string glued into a ¼" hem. The extra un-Eddyish width made it possible for me to use two identical ¼" square by 48" aircraft spruce sticks for both the spreader and the longeron. Suspended by the longeron, the canopy—weighted by the spreader—does project as an Eddy configuration; but in flight, the assembly pockets much more than a typical Eddy, displays marked concavity of the trailing edges, and does indeed "hang loose."

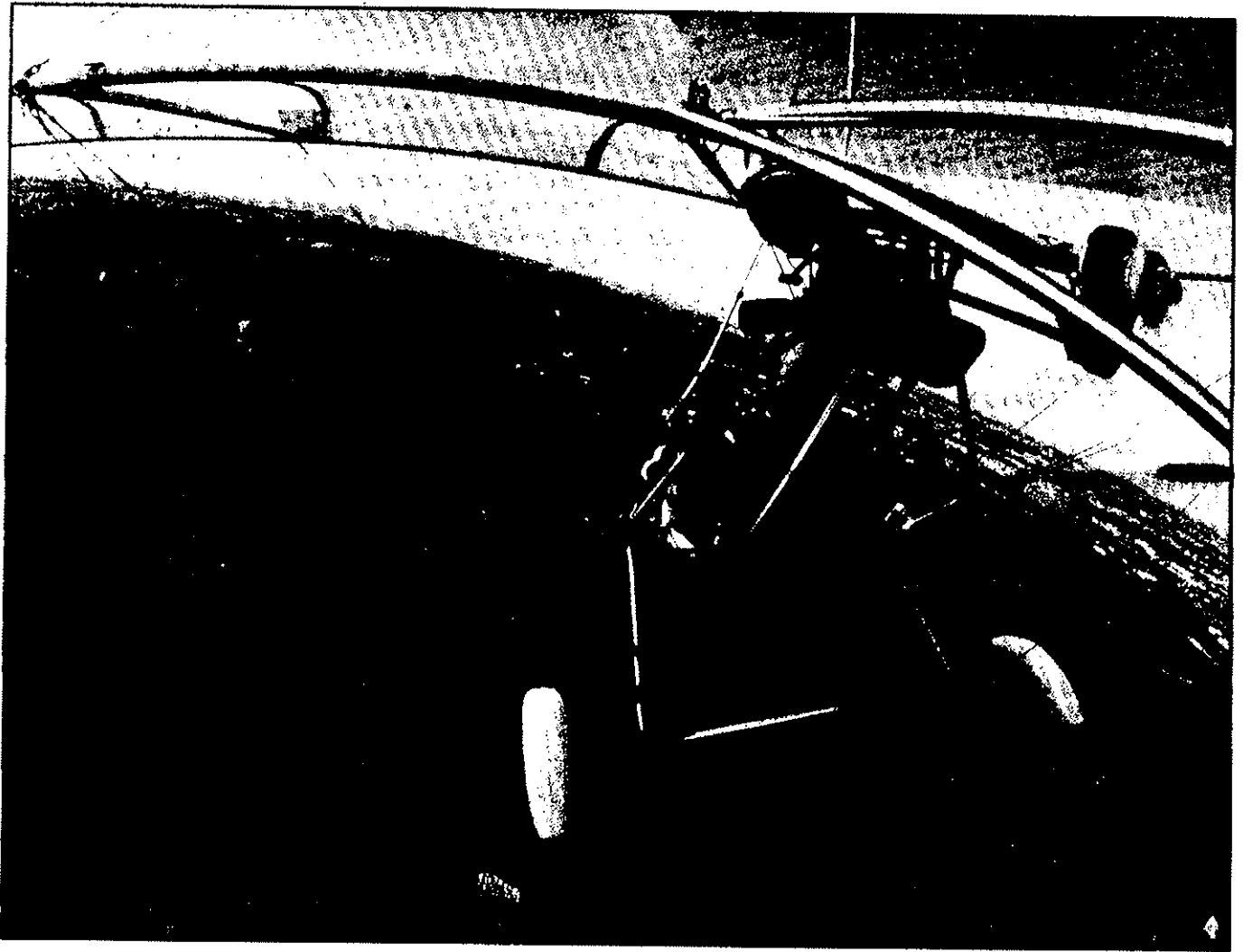
The first trial flight was made with a two-leg bridle, no added keel, and without leading edge stiffener spars. The kite did just fine

in light air, but occasionally a leading edge would tuck under, the kite would sideslip, invert, and prang into the ground. Taping 29" long pieces of dowel to the leading edges cured the tuck-under problem, but all was not yet quite right. The deep pocketing fold at the trailing end of the longeron performed as would excess keel area set too far aft. In brisk wind, especially in turbulence, the excess encouraged yawing sideslips that again degenerated into dives. By taking the original *DATA LETTER* advice and attaching a small right-angled keel at the upper portion of the canopy, I finally had a stable kite that takes line out in a hurry, pulls well in light air; but it sensibly luffs—flutters—when the wind gusts or becomes uncomfortably vigorous.

Hang Loose is a high angle flier in light air; but it is an easy riding, modest puller. Maybe the giant-kite freaks could do something with *Hang Loose* and avoid the risk of having their arms strained, stretched, to ape-like lengths.

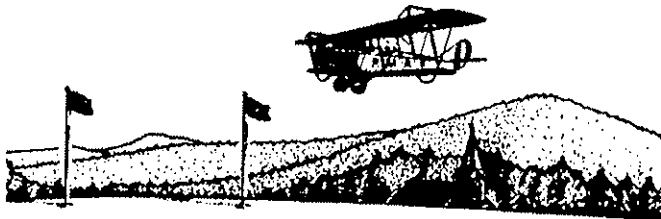


*LUCIE FERR is a PMAF Regular who believes the new French auto, *Le Broome*, was not intended for lady kitefliers: "Maybe it was made for females in Public TV or in Journalism," she says.



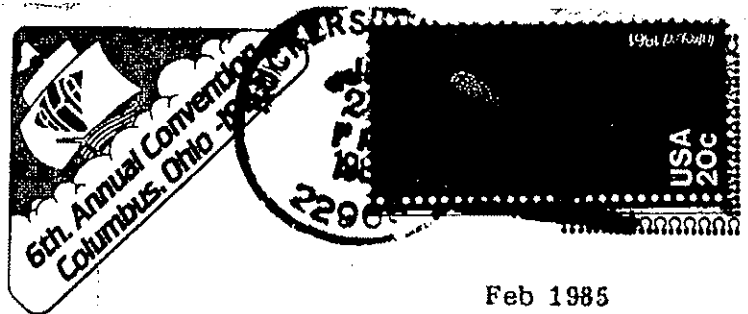
This heady portrayal of the freedom of ultralight flight by Thomas A. Horne, skillful photographer and editor, is reproduced here with kind permission from *Ultralight Pilot*, issue of Nov/Dec 1982. (Copyright© Aircraft Owners and Pilots Association 1982; all rights reserved.)

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