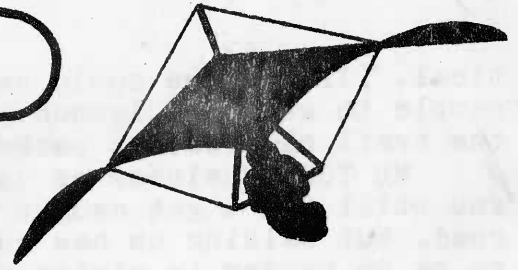


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NEWSLETTER of the WESTERN MASS. HANG GLIDER ASSN.

Vol. 2, No. 1 JANUARY 1976 Editor: M. Morrissey

WMHGA

The January meeting of WMHGA was held as usual on the first Wednesday of the month. Due to low interest in assisting with the preparations, the dinner party that had been planned for the February meeting was canceled. The possibility of holding a cookout at Mitch's in the spring was mentioned; maybe if a few people are willing to help out, this will come to pass. It was decided that the secretary will write and collect all available information on the insurance programs offered by GSI and USHGA. This should clear up the questions that many of us have regarding just what kind of coverage our GSI policy provides, and also help us decide if USHGA has a better program. Entertainment was provided by Bob Stewart, who showed us the movies that he and his dad have put together. Complete with musical sound track, these films are more enjoyable than many of the professionally produced commercial films that we've seen. Due to bad weather and a low turnout, we didn't set up a glider. Discussion of changing our meeting place was postponed for the same reason.

FEBRUARY MEETING

...will be held as usual on the first Wednesday of the month, that's Feb 4, at 7:30 PM at the American Legion on New Ludlow Road, off of Rt 33, in Fairview. We'll be considering having our meetings at the ME Lounge near Skinner in the future. Entertainment has been arranged, and we'll have one of the high performance gliders set up and explained for us. Also, we hope to have some further information

on the availability of winter flying sites.

WINTER FLYING

Speaking of wintertime flying, here's some updated information on some of the local sites.

PETERSBURG PASS: The ski area has changed its name to Mt Rainer Ski Area, and if you attempt to call there, be sure to ask "information" for the number under the new name. Otherwise you'll get a wrong number, and just annoy some poor guy in Petersburg who now has the same phone number as the area's old one. (The correct number is: 1-518-658-3399) By the time you read this, Brooks Ellison hopes to have up-to-the-minute flying information available at this number.

Also, the landing area has been enlarged somewhat, an alternate LZ has been arranged near Rt 2 (be sure you don't go for the wrong one!!), and the regular take-off has been blocked by a snow fence. Launches are now made below the embankment, or across the road, for the duration of the ski season.

SKINNER: As of a couple of weeks ago, snow had drifted into the normal launch spot, and the trail to this spot was not cleared of snow. It would take several people and a bit of work to clear the trail and the take-off point, but nobody has bothered to do so yet...

It's possible to launch by the hotel in soaring winds, but don't try it in less than 12 to 15 mph; you won't clear the trees! Access to the hotel by snowmobile is prac-

tical. (If only we could get a few people to get that launch point and the trail cleared, or packed down...)

Mt TOM: Business as usual here; you still can't get caught on the road, but walking up has turned out to be no harder in winter than in the summer - easier, in fact, as you don't get all sweated up in the cold weather. The trail is well-packed, and if you wear crampons, it's no great hassle. The take-off areas are clear of snow and ice.

NORTH SUGARLOAF: The trail to the top, as well as the launch spot are both well packed down. Walking up is easy, and making the trek by snowmobile would be even easier. The mountain has seen a lot of flying of late. If you fly here, remember, it is still a guerilla site; DNR hasn't yet given permission to open it up. Slink up discreetly. Also, carry a waiver form, as one of the landowners who's field makes up part of the landing zone wants waivers.

SUNDOWN: Closed for the duration of the ski season; probably mid-March in that area.

SODOM MOUNTAIN: Status unknown, but probably OK for flying; check with the management before flying there.

MITCH's (The Slot): open for flying, if you don't mind dodging toboggans and sleds...

CRAMPONS

These little devices make all the difference in the world for take offs in snow or ice, not to mention climbing up the mountain. However, shop around before buying any. We've gone into stores where the cheapest pair available goes for over thirty dollars. John Dempsey discovered a war surplus store that has crampons for under three bucks a pair, and we soon discovered that other surplus stores have the identical items, at the same price. They're also ideal for flying use; they weigh only a few ounces, and have small points, all under the ball of the foot. Super easy to run in, they won't trip you up, and they adjust infinitely, to

fit over virtually any footgear. So if you plan to fly in the next couple of months, hit thee to the nearest surplus store at once!

HANGAR FLYING

If the cold weather's got you down, and you'd rather wait for the spring before taking to the air, you should pick up Richard Bach's latest book; guaranteed to get your mind into the sky, even if it can't stimulate your body to follow. It's called "A Gift Of Wings," and it's a collection of his best stories, essays and articles. Anyone who is into any form of flying will love it (except maybe airline people and FAA types...)

DELTA WING KITES & GLIDERS A Look at Uncle Bill

Unlike most manufacturers, Bill Bennett didn't get into hang gliding from any other kind of business; he was a professional flyer before most of today's pilots were even born. Bill got into tow kites as a professional daredevil right after leaving the Australian Navy in the early 50's, when the only kites available were flat kites which Uncle Bill has described as "inventions of the devil." He and John Dickenson built kites for Bill Moyes, then a Bennett partner, and during this period Dickenson came up with the idea of the Rogallo tow kite.

Bennett's early Rogallos were made of timber and plastic, were built on floats, and weighed over three hundred pounds! At this stage, they were using twelve-foot Rogallo wings, and the kites had a take-off speed of around sixty knots. During the decade between the development of these kites and the discovery (legend has it, an accidental one!) that the Rogallo wing could fly free of the towline, and Bennett's first trip to the US in the late 60's, he almost single-handedly developed the modern aluminum Rogallo kite.

Uncle Bill's arrival in the US was a pivotal point in the develop-

ment of hang gliding, for it was his adaption of the triangle bar control system, instead of the then-common parallel bars, that made the Rogallo wing safely controllable.

His world-travelling vacation cut short by a demonstration tour of water-ski shows with his revolutionary free-flying Rogallo tow kite, Bennett found a quickly-expanding demand for his new kites. He settled in California and began producing Bill Bennett's Delta Wing Kites. Soon thereafter, the words And Gliders was added to the corporate name, as his kites began to be used as foot launched hang gliders.

The addition of a line of larger Rogallos for free flying, a move to new facilities in Van Nuys, the acquisition of engineer-designer Dick Boone, and the development of a line of hybrid Rogallos followed, and at present, Uncle Bill is still coming up with new tricks in order to maintain his position as one of the leading manufacturers in the field.

Features of Bennett gliders include such trick touches as easy conversion of all gliders to tow-kite configuration, special seated-type control bars with "belly bulges" and knuckle protectors, non-slip cable tensioners in place of turnbuckles, Mylar coated sails for less drag and reduced porosity, and other such touches. Plans for the future include the development of more high-performance gliders, continuing development of the back-pack engine, and a continued shift in emphasis from tow kites towards free flying gliders.

The current lineup of gliders:
TOW KITES: a line of standard Rogallo tow kites, also convertible to hang glider configuration by using a different control bar. 80° nose angle.
SKYTREK: a cut-keel 18/16 glider, convertible from free-flight to tow. Available either fully battened or without battens, and like all Bennett kites, has a Mylar coated sail. Cambered keel for extra lift. 90° nose.
PHOENIX: a 19/17 cut-keel ship with cambered leading edges and keel, and a sharply scalloped sail. 95° nose.
PHOENIX TX: an 18/14 version of the

Phoenix, primarily for towing but also suitable for free flight. Has a fully battened sail as well as a higher aspect ratio than the regular Phoenix. Nose angle, 95°.
PHOENIX VI: furthest development of the Phoenix line, this is a wide-nosed (102°) 19/14 high aspect glider with low billow, full battens, and super-wide leading edge pockets that fill by a ram-air effect to form a double-surfaced airfoil on the front part of the wing. (Reminds one of the Kestrel, except that the airfoil isn't held rigid.)

THOUGHT FOR THE DAY

"It isn't that there are too many pilots - it's that there are too many DUMB pilots."
- Richard Bach

MOUNT TOM

Right Here In River City...

It's rather amazing, when you stop to think about it, how few of the many flyers who regularly use Skinner, have ever bothered to cross the river and take a shot at Mt Tom. After all, right in the middle of Western Mass, we have a two mile ridge topped by a vertical cliff, facing right into the prevailing westerlies. California conditions in New England! Perhaps if we take a good look at the place, a few more people might give it a try. (And a few others might save themselves a long walk!)

On the statistical side, this site features a vertical drop of 1100 feet from the usual launch site to the landing zone. Compass headings are between 285 and 305 degrees, depending upon where you are on the ridge, and it is soarable in west and northwest winds. If you can get across a few gaps in the cliff face, you can soar from the Channel 40 transmitters on the south end of the ridge, up past Goat's Peak to the end of Mt Nonotuck, almost two miles away.

As most of you know, Mt Tom is a non-regulated, semi-guerilla site.

The only vehicle access is by means of the road from the ski area up to Channel 40. The TV station owns the road, and does NOT allow it to be used for hang gliders or any other purpose. A gate at the bottom is usually locked, and when it is open, if you are caught using the road, you will be prosecuted for trespassing. Walking up the road does allow for a better chance of escaping detection, but has already led to chases through the woods by the police, in the true tradition of guerilla aviation at its worst.

Flyers should keep in mind that every time someone gets spotted on the road, decreases the chances that we will ever get it opened up for our legitimate use.

The only "proper" access is by way of the powerline or the parallel hiking trail that originates near the Log Cabin Restaraunt. If you begin your climb here, you are already half-way up the mountain, and if you follow the marked trail, you'll see that the climb is not much worse than the Half-way trail at Skinner. Once at the top of the mountain, you skirt the transmitter area, and emerge on top of the cliff. Here you will find some signs, courtesy of the TV station, that say "Hang Gliding Prohibited."

Since the station claims to own the whole ridgetop, the signs will stay. However, a little research has shown that the station does NOT own the whole top of the mountain - just a small spot under their building and towers. Nobody, including the people at Channel 40, knows exactly where the property line really is. The rest of the ridgetop is public property, being part of Mt Tom State Reservation, and administered by Hampshire County. Nobody knows how the county feels about hang gliding, and maybe that's just as well...

Takeoff is at any of several spots along the cliff. Three of the most popular points involve a few steps and a launch out over empty space - the cliff drops off like the edge of a table. A few yards to the south, there's a place where a run-

ning launch is possible, down a fairly steep slope. This is where some pilots self-launch in soaring winds. Wherever you launch, you'd better do it right. The cliff is a couple of hundred feet straight down, and a tip stall or a stunch on takeoff is likely to be fatal.

Once airborne, good lift is available within a couple of hundred yard section near the launch points. If you can get good altitude here, you can shoot the gap of low lift over to some even higher cliffs to the south. Get really high here, and you might make it over to Goat's Peak on Mt Nonotuck, from where you can soar almost down to Rts 5 and 91.

There are days at Tom when the lift is smooth as glass, but there are others which feature some of the worst turbulence you'll ever see. The lift band tends to be wide, and on strong lifty days, we've seen pilots soaring out past Rt 141, almost over the landing zone. Thermal lift is also available, arising from the cliffs themselves and the talus slopes below, as well as from the fields out past the mountains. On a good day, thermal lift will enhance or even substitute for ridge lift; on a bad day, the combination spells wicked bumps.

It's significant that if you ask the pilots who fly there a lot about the mountain, the class threes will mostly tell you that it's just like any other site, but better; the class fours are mostly afraid of the place, and will admit it. Before taking your first leap off Tom, it would behoove you to find out what it is that they know, that you don't.

Landing is no great problem at Tom, as long as the exceptional altitude doesn't throw off your judgement of your L/D. The primary LZ is Don Hicks' front yard, a large field directly out front of the takeoff, and recognizable by the circular dirt driveway that crosses it, and the large house and garage in the back of the property. Main alternate is a somewhat larger field to the right of Hicks', owned by Don Raymond's grandfather. This is much

easier to hit, due to it's size, but you have to be able to miss the cows. Other alternates abound in all directions, all along the ridge, so there is no excuse for an out-landing in the foliage. However, a few pilots have managed to hit the trees, and undoubtedly more will do so.

Rules of thumb for Mt Tom are; if you can't cope with unexpected turbulence, learn how before you fly here; and, if you can't hit the regular landing zone, you aren't ready for Tom. This is a class four site, advanced class three on a good day. If you can't make a perfect takeoff from a vertical cliff EVERY time, you shouldn't fly it.

So that's what TOM is like. If you don't belong there, better you should find out be reading about it. But if you're really ready, go for it!

REFLECTIONS

FLYING is one of the few popular sports in which the penalty for a bad mistake is death. At first, that seems a horrible and shocking thing, and the public is horrified and shocked when a pilot is killed committing an unforgivable error. But such are the terms that flying lays down for pilots: love me and know me and you shall be blessed with great joy. Love me not, know me not, and you are asking for real trouble.

The facts are very simple. The man who flies is responsible for his own destiny. The accident that could not have been avoided through the action of the pilot is almost non-existent. In the air, there is no equivalent of the child running suddenly from between parked cars. The safety of the pilot rests in his own hands...

No one on the ground is able to do his flying for him, however much that one may wish to help. Flight remains the world of the individual, where he decides to accept responsibility for his action or he stays on the ground. Refuse to accept responsibility in flight and you do not have very long to live.

What determines whether you should fly, then, is not...your desire for a challenging new sport. It is what you wish to gain from life. If you wish a world where your destiny rests completely in your own hands, chances are that you're a natural-born pilot.

- Richard Bach

BOARD MEETING

There will be a board meeting for all the officers of WMHGA on Wednesday, January 28, 1976. Time will be 7:00 PM, at Mountainview Glider-sports in Northampton. All officers are asked to please be present.

HIGH PERFORMANCE GLIDERS (Part 2)

Last month we looked at the various factors that make up 'high performance' in a hang glider, and at a few of the design parameters that a designer has to manipulate in the search for more performance. It was seen that the quest for more performance in a ragwing glider is largely a search for a higher aspect ratio ship with suitable handling characteristics; but that other factors, such as the shape of the air-foil used and the size of the aircraft (wing loading) also enter the equation. This month, we're going to review the development of the flexible wing glider, and see how today's high performance ships have evolved.

The modern era of hang gliding began with the discovery, well chronicled elsewhere, of the Rogallo wing. Early rogallios were home-built, made of crude materials, and their performance was, for the most part, rotten. Bennett's introduction of the aluminum and dacron Rogallo brought about a performance increase simply because a standard Rogallo will exhibit it's best flight characteristics if it is constructed properly. Early kites, with their flexible airframes and floppy sails were such drag machines that no actual design changes were needed to provide a performance increase.

Once the aluminum and dacron kite became common, the next step was for pilots to go to lighter wing loadings, for the improved sink rate and lower stall speeds obtained. At first, pilots were flying 12 and 14' tow kites; gradually, kites grew in size as the larger gliders proved to be safely controllable.

Phase one, then, was simply the refinement of the standard Rogallo. As wing loading stabilized at about 1 lb/ft², the next step was to begin to reduce drag. First, sails were made with a "dogleg" to reduce drag caused by airframe distortion, and it was found that a clean sail can outperform a wrinkled one by a significant amount. Next came deflexers and the ability to keep a sail free of wrinkles in turns as well as in straight and level flight. In a further effort to reduce drag, billow began to drop, producing flatter airfoils. Soon, however, pilots realized that the standard Rogallo had been refined to the limit. Flatter sails produced squirrely stall characteristics and yaw problems; cleaner sails just couldn't be had, once wrinkle-free sails had become common; wider noses simply 'lengthened the keel', reducing maneuverability and adding drag that had been so much trouble to get rid of, as well as producing penetration problems. Yet pilots still wanted more performance. No matter how well put together your standard was, it still couldn't get past an L/D of about 4 or 4½ to 1, and a sink rate of about 450'/min.

At this point, it was realized that the standard Rogallo was only suitable, but far from ideal, as a hang glider. The design had been originated as a parachute substitute; it was designed to get objects down from high places with maximum stability and adequate control - but the key word is to get things DOWN. If you wanted to stay UP, and if maneuverability became more important than maximum stability, then maybe the hot set-up was to change the basic design somewhat.

It was at this stage that the Seagull 3 appeared, and for its time,

it was a revolutionary design. By cambering the leading edges, it was found that the shape of the airfoil was markedly improved for slow-speed flight, resulting in a much better sink rate. By widening the nose and shortening the keel, a super soaring kite was obtained. However, all was not solved. The new glider was not the greatest ship in strong wind, as that wide nose and deeply humped airfoil simply didn't want to penetrate like a standard. Also, due to the drag produced by these same features, the more efficient wing still had an L/D no better than a standard. For this reason, cambered leading edges have not been widely used. (It is also possible that designers have shied away from this feature because it was characteristic of the infamous Chandelle Comp - although it was not the cambered leading edges, but the way they were cambered, that was responsible for making the Comp a killer.) Today, cambered spars grace the entire Seagull series, as well as the early Phoenix series from Bennett, and all of these kites are noted as real floaters in low winds.

At the same time that Seagull was working on reducing sink rate, other manufacturers were working on the problem of extending the L/D. As it turns out, this is even easier to accomplish - with an increase in aspect ratio, it's almost automatic, and along with the higher L/D, you get an improvement in sink rate for free. Granted, not as dramatic as with cambered wing spars, but without the penetration problems either.

The theory is simple: if a wing produces most of its lift in the forward sections, right behind the leading edges, and mostly drag in the tail area - just cut off the tail! Redesigning the standard with the keel a couple of feet shorter than the leading edges produced aircraft with both L/D and sink rates noticeably better than the best of the standards, and soon a whole fleet of such gliders was available. The Sky Sports Bobcat, UP Redtail, Bennett Skytrek, Sun II, Eipper 19/17, and many others are representa-

tive of the type. Another way of doing the same thing is to scallop the trailing edge of the sail, so that even though the keel isn't shortened, the trailing edge of the sail still is removed. The Sport Kites Swallow-tail and the Sun III are examples of gliders like this.

These second generation Rogallo gliders offered an increase in nearly all aspects of performance. They did, however, have their drawbacks, primarily in the area of stability. That drag area that had been cut out of the design had acted as a sort of tail; and removing it, while giving increased maneuverability, also gave these gliders noticeably less-forgiving stall characteristics. Parachute landings, for instance, were no longer a simple proposition, and tip stalls, especially on take-off, were a hazard to some degree. Definitely, you had to be more careful with a glider like these.

The next step was to stretch this same concept a bit farther. If performance improves when you cut two feet off the keel, why not get even more performance by cutting an extra foot or two off? Well, you can - to a point. Gliders like the UP Super Redtail and the Windlord had keels about four feet shorter than their leading edges, and they did perform better yet, in terms of sink rate, L/D, and maneuverability. However, at this stage, those sharp pointed wingtips were getting to be a real problem. Especially when combined with wider nose angles and flatter sails, the super-short keels gave some rather unforgiving flight and stall characteristics. The UP SRT spec sheet, from the factory, includes a warning that the SRT will (not may - WILL) "fall off" on one wing in a stall, and should be flown by expert pilots only. And they don't call the Windlord the "Spinlord" for nothing!

Ships like these were great for competition, in the hands of expert, cautious, and highly disciplined flyers. However, they were just not the hot set-up for most pilots. If the

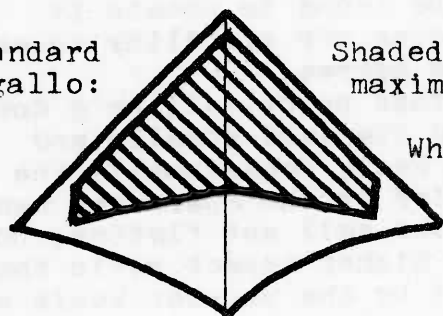
majority of pilots were to enjoy the benefits of higher performance, some way had to be found to obtain it without trading off stability to an unacceptable degree.

Up to this point, all we'd done was take the standard Rogallo and shorten the keel; occasionally the nose got wider or the spars got cambered, and the sail got flatter, but mainly, the higher aspect ratio that was obtained by the shorter keels was what distinguished the second generation ragwings. As the keel got shorter, the performance got better, but stability and stall characteristics got worse and worse. Much of the problem had to do with the fact that, as aspect ratios rose, wingtips got sharper and sharper. The tips of a delta wing are a problem area, since they aren't very efficient compared to the rest of the wing. They stall easily, and once stalled, the stall tends to roll up the wing, causing the glider to bank radically, which aggravates the stall. In a flash, the ship is in a spiral dive, out of control. This is the familiar 'tip stall' that has sent many a pilot arcing back into the side of a hill after a slow take-off run or a too-steep turn.

If you want to get rid of tip stalls, the solution is simple - get rid of the tips. Just cut 'em off and throw 'em away. That's exactly the effect that is obtained through the use of squared-off or truncated wingtips. By cutting off the pointed tips, you've not only gotten rid of an aerodynamic problem area, but you've also lost a lot of drag, and very little lift. In effect, you've decreased your span, but obtained a wing that produces lift as though it were a regular delta wing of much longer span. You can then cut your keel even shorter, raising the aspect ratio even more. Where the standard Rogallo makes most of its lift behind the leading edges, and inward from the tips, while most of the rest of the sail just follows along producing drag, your new glider has eliminated all except the lift-pro-

ducing area. The diagram below more or less demonstrates what's being done:

Standard Rogallo:



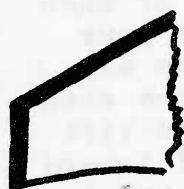
Shaded area: maximum lift

White area: mostly drag

The standard Rogallo produces most of its lift in the shaded area of the diagram - and the super-short keeled, truncated tip rogallo uses only that part of the sail.

The benefits multiply: with all that drag area gone, you can use a smaller glider, with a higher wing loading, increasing maneuverability and penetration; you can also get away with a wider nose angle, which raises the aspect ratio of the wing, and its efficiency, even further.

Truncated tips provided the means of making a really high aspect flexible wing which would be easily controllable, maneuverable, yet safe to fly. However, they do add some weight, due to the structure required, and they cost money to produce. A lighter and cheaper way of getting the same effect, somewhat less pronounced, has been to alter the shape of the wingtip by the addition of a stabilizing batten. Generally, with kites that do not use the exceptionally wide noses that 'truncs' allow, the stabilized batten tip has been sufficient. Although the pointed wingtip has not been eliminated, the point is not nearly so sharp as a regular tip would be with the same nose angle.



Truncated Wingtip



Stabilized Batted Wingtip



Ordinary Delta-wingtip

As gliders became more and more sophisticated, performance showed a marked increase. From the 4:1 and 450'/min of the standard, we went to about 5:1 and under 400'/min in the short keeled gliders, to about 6:1 and 350'/min in the super short keeled ships, and now, with the new third generation flexible wings, we are seeing glide angles in excess of 7:1 and sink rates well below 300'/minute.

First of the truncated-tip ships was the UP Dragonfly, soon followed by gliders such as the late Cumulus series from Eipper, the Price Special from Sport Kites, the Sun IV, the Phantom Scorpion, and others; most of these differed from the Dragonfly only in small details, such as the amount of billow in the sail, the nose angle, and the like. Not long afterwards, a number of gliders appeared that used battened tips, not-so-wide nose angles, and trick airfoils in the sail.

Earliest of this class of gliders was the Sky Sports Kestrel, and it was soon followed by ships like the Bennett Phoenix VI, the Electra-Flyer Cirrus, and others. This category of gliders is characterized by less radical airframe and planform configurations, and experimentation with battened sails, and in some cases with inflatable, double-layered sails.

At present, it is impossible to say which of these types of gliders, much less, which ship within each category, is the better performer. A few of the gliders have exceptional L/D's, even compared to the others; different ones have incredibly low sink rates; some are more maneuverable than others; some have penetration problems; others have stability problems. However, certain things are already apparent.

One is that the new gliders do actually offer performance far in excess of what has been available to pilots of the older, simpler "four tubes and ten wires and a hunk of fabric" flexwings. Cost and complexity have been the price of progress.

Another factor is that pilots must adjust to a different kind of

flying. Control, with the more efficient wings and the higher wing loadings being used, is much more responsive. Pilots talk of learning to fly with their wrists, instead of with motions of the whole body. Judgement of glide angles and sink rates becomes more difficult as glide paths flatten out and kites float more slowly. Now a pilot must be able to set up an approach, not just aim for a spot at a fairly steep angle, and parachute in if he overshoots. Initiation and recovery from spins is now part of an expert pilot's repertoire (yes, the high aspect gliders will spin - but they will also recover easily - IF you know how! - an improvement over some of their predecessors.) While these new ships add a new dimension to a good pilot's flying, they also make it much easier for the novice or intermediate to get in over his head.

On the whole, though, safety is one of the strongest arguments in favor of the new wings. The UP Dragonfly, after a full year of production, still has a perfect safety record. The Sky Sports Kestrel, after almost half a year, still sports a similar record, and as far as we've been able to find out, nobody has yet been killed or seriously injured in any of the third generation gliders.

Nose angle, reflex, camber, airfoil shape, deflexers, keel tensioners, aspect ratio, wingspan, battens, truncated tips, stall speed, wing loading, keel length, stabilized tips, sink rate, L/D, penetration, roll rate, spin recovery, tip stalls, billow, pitch stability, stall characteristics, maneuverability, taper ratio, these are just some of the things that a hang glider designer must consider. All of these factors interact, and to put them all together properly, to form a wing that will carry a pilot safely through all kinds of situations is an incredible challenge. But the challenge is being met, and the results are getting more and more exciting all the time!

RATINGS AND RELATED STUFF

In the past few weeks we've been

hearing a lot of noise about rating classifications. In particular, the flak is coming from a number of our class 3 pilots, who are wondering why they aren't being awarded class 4s. Most of the time, the complainant has conveniently forgotten that there are certain requirements that must be met for each classification. Not surprisingly, those requirements that are most easily forgotten are exactly those that the particular pilot hasn't yet met. A review of the system, as explained in your GSI package, would be worth while if you are one of the pilots in question. (Of course, if you don't have GSI, you aren't in the system anyway, so what do you care?) The point to remember, though, is that the particular tasks set for a class four are simply MINIMUM requirements and just because you've made certain numbers of flights, doesn't mean you are automatically qualified for a class 4. The primary requirement is that a class 4 pilot demonstrate, by both SKILL and JUDGEMENT, that he is an all-around EXPERT. This requires both skill and judgement be shown with consistency. Just because you are a pretty good pilot, doesn't mean you are an EXPERT. And just because you've flown a lot, doesn't mean you have judgement - it may be only an indication of good luck.

In the past few months, we've seen pilots who either carry or are convinced that they should carry c14 cards:

perform a low-altitude 360 into a downwind landing at the edge of a landing zone, when a 180 would've put him into an upwind landing right in the center of the LZ.

...Describe a flight wherein he "eased the bar out almost to a stall for maximum L/D."

...Wonder why he couldn't soar in a 20 mph wind - when that wind was blowing at a 90° angle to the cliff.

...Write for publication that you can get into a vertical dive by pulling in on the bar of a properly trimmed Rogallo, in calm air, in a straight and level glide.

...Blow back into a hill by push-

ing full out on the bar, and holding it there, while self-launching in soaring conditions.

...Attempt a take-off with no lift blowing, at a launch point that requires a 6:1 glide in the first few seconds after liftoff.

...Fly from a major mountain site in a glider that contained a heart-bolt purchased in a hardware store,

...and attempt to justify this by explaining that the central structure bears no stress in flight.

...Modify a glider by cutting off the keel with a hacksaw and scissors.

Need we say more? We will anyway, if only to add that the ConnHGA went through a period of handing out C14's to anyone that thought they deserved one, only to find that their ratings had become the laughingstock of New England hang gliding; finally having to recall, for reconsideration, all current class 4 ratings.

Thankfully, not all of the above incidents involved local flyers - the WMHGA has no monopoly on turkeys and idiots - but most of them did involve local pilots. And virtually all were pilots who either have class 4's, or are actively grumbling because they received class 3's.

Remember, nobody can judge his own judgement, and few are objective enough to judge even their own level of skill. Remember, too, that if we go around handing out advanced ratings like candy bars on Easter Sunday, all it will mean is that nobody will honor those ratings - not even after the pilot has grown into them.

CELEBRATION

Sue McGuire will be celebrating the removal of the cast from her arm with a party at her place on Saturday the 31st of January. Punch will be served - otherwise, BYOB. Call Sue at MGS if you're coming and need directions to her house.

DEDICATION

Our attention was recently called to a newspaper article about an

Australian hang glider pilot named Wayne Blackmore. What's unique about Wayne is that he is the only known paraplegic hang glider pilot in the world. Twenty-three years old, and president of the South Australia HGA, Wayne was paralyzed from the waist down in a powerplane crash four years ago, and took up hang gliding AFTER his injury. He flies from his wheelchair, using a special seated harness that picks him right out of the chair on lift-off, and holds his legs straight out in front of him as he flies. Landings are made on wheels that attach to a special elongated control bar. The article didn't say what happens to the wheelchair after Blackmore leaves it rolling along the runway - we assume he's solved that problem, however. (Either that, or he has wads of money - cliff launching, especially, could get expensive.) Some good photos accompanied the article, but unfortunately, they are not reproducible here, due to the poor quality of the newspaper prints and our less-than-sophisticated way of reproducing this newsletter. For those that are wondering, Blackmore appears to be flying a Seagull III.

WILL THE REAL...

Hang Glider Weekly recently ran an item to the effect that "Chris Starbuck has finally relocated to an out-of-the-hospital address..." and listed an address in Southern Cal. Does anyone know if this is the same Chris Starbuck who once soared a plastic and bamboo Rogallo off of Mt Washington and Mt Greylock (and had the same kite fall apart in the air, on takeoff at Sundown, on its next flight)? Wonder if it's him - and if so, how he ate it...

IF YOU DON'T HAVE A HILL...

For what it's worth, an Icarus II with a 12HP motor has taken off from level ground in no wind, and climbed to thermal-effective altitude, in the midwest. Same guys are working on a 15HP Icarus V. Sure beats walkin'.



Mountainview Glider Sports, Inc.

300 PLEASANT STREET, NORTHAMPTON, MA 01060
Telephone 1 (413) 584-7233



DID YOU KNOW:

That Ultralite Products is one of the few manufacturers that still test flies and trims out every glider before it leaves the factory?

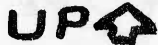
That the UP Dragonfly has a top speed in the area of forty miles per hour with a normal wing loading, allowing it to surmount the penetration problems plaguing so many other high aspect gliders?

That after a full year of production, the Dragonfly still has a perfect safety record?

That the Dragonfly has proven itself to have stability and maneuverability unmatched by any other super-high performance hang glider?

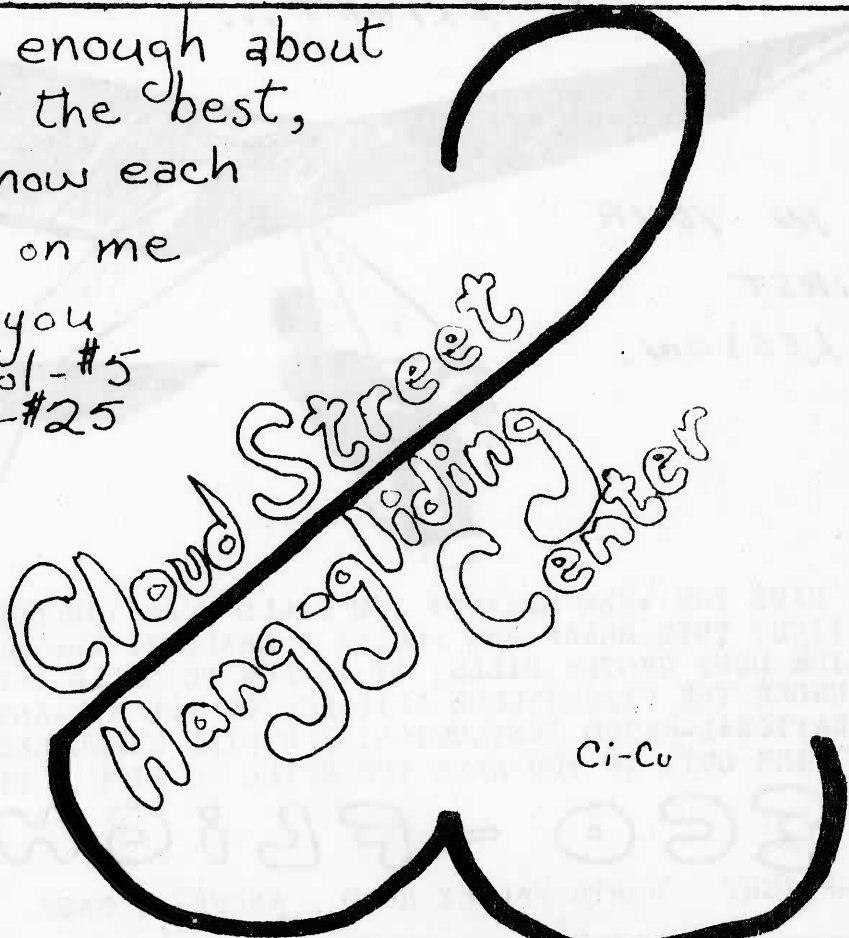
That the Dragonfly's ability to deliver total performance over a wide variety of conditions with a maximum of safety is still unsurpassed?

That the unequalled quality, workmanship, and performance need cost you no more to own than any other high performance wing?

Think about it. Maybe it's time that you started going **UP** 

If you're serious enough about hang-gliding to call the best, we'll be glad we know each other. Feel free, call on me for any information you need. Ground School - #5
Flight Lesson - #25

G.S.I. Certified Advanced Instructor #01029; Teaching 2 years; Over 1500 flights; Placed 9th in 1975 World Championships in Austria.



There's room in the sky

Chuck LaVersa 1-413-625-2409

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DO YOU WANT TO BUY A NEW KITE OR FIX UP YOUR OLD ONE?

ARE YOU INTO MODEL ROCKETRY?

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THE VILLAGE KITE SHOP
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AND WE'LL TAKE CARE OF YOU

OUR QUALIFIED STAFF IS WAITING TO SERVE YOU.

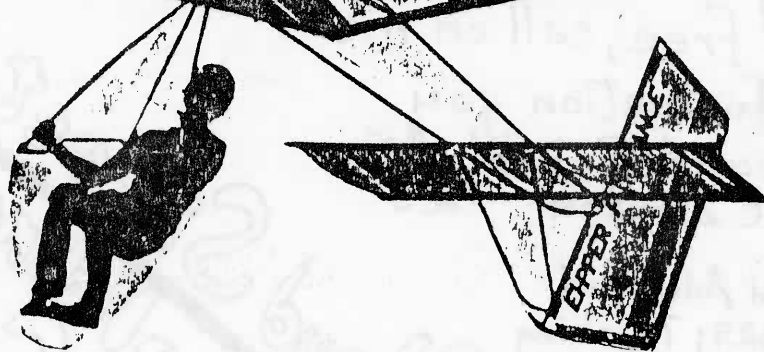
BOB ROBBINS
1-413-283-6931

KEN GAGNE
1-413-283-8185



DISCOVER THE FREEDOM
OF FLIGHT...

... IN YOUR
FIRST
LESSON.

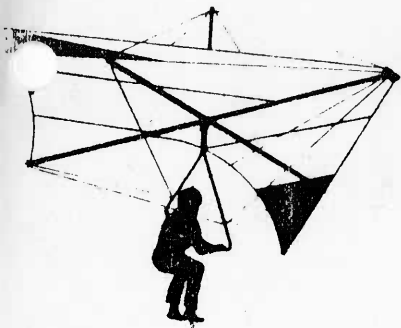


HAVE YOU EVER DREAMT YOU COULD SOAR THROUGH THE SKY WITH THE FREEDOM OF A BIRD? THIS DREAM HAS BECOME A REALITY. WHETHER IT IS TO SOAR OFF MOUNTAINS OR GLIDE DOWN GENTLE HILLS, IT IS NOW POSSIBLE FOR NEARLY ANYONE TO LEARN TO FLY. UNDER THE EXPERIENCED GUIDANCE OF BOB STEWART, ECO-FLIGHT'S GLIDERSPORTS INTERNATIONAL-RATED INSTRUCTOR, YOU WILL EXPERIENCE THE THRILL OF FLIGHT YOUR FIRST TIME OUT. IF YOU HAVE THE SKILL TO RIDE A BICYCLE, YOU CAN LEARN TO FLY!

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SALES

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FLYING CLASSES

DUE TO INCREASING DEMAND, VENUS HANG GLIDER, INC. HAS SET UP CLASSES ON THE SPORT OF HANG GLIDING.

THESE CLASSES WILL INCLUDE THE FOLLOWING:

1. INDOCTRINATION OF THE ROGALLO TYPE HANG GLIDER.
2. AIR IN MOTION.
3. THEORY OF FLIGHT.
4. PRACTICE GROUND RUNS.
5. FIRST FLIGHTS LOW & SLOW (YOU FLY).

AFTER YOU HAVE COMPLETED THIS CLASS, ITS ALL A MATTER OF PRACTICE AS TO HOW WELL A FLYER YOU BECOME.

COST OF THE CLASS IS \$25.00 PER PERSON.

TO SIGN UP FOR FLIGHT INSTRUCTION CALL: BOB POULES (413) 783-8260

FEATURES OF A VENUS HANG GLIDER

1. VENUS HANG GLIDERS MEET, AND IN MOST CASES EXCEED THE SPECIFICATIONS SET FORTH BY THE HANG GLIDER MANUFACTURERS ASSOCIATION.
2. 90 DEGREE NOSE ANGLE FOR GREATER LIFT AND LOWER STALL SPEEDS. (NOT AN 80 OR 82 DEGREE AS MOST MANUFACTURERS USE).
3. 6061 T6 TUBING WITH THICKER .058 WALL (NOT .049)
4. CONTROL BAR AND KING POST ARE .068 WALL.
5. (AN) AIRCRAFT TURNBUCKLES (NEW NOT SURPLUS)
6. ALL LOAD BEARING BOLTS ARE 5/16 (AN) AIRCRAFT TYPE.
7. AIRCRAFT FLYING CABLE (STAINLESS STEEL 7X7X3/32 CONSTRUCTION, LOWER CABLES ARE PLASTIC COATED FOR ADDED PILOT PROTECTION.
8. DOUBLE NICO SLEEVES ON FLYING WIRES.
9. STAINLESS STEEL NOSE PLATE, TANGS, AND SHACKLES.
10. EXTRA STRONG DELRIN SADDLES AT KEEL/CROSSBAR JUNCTION AND AT LEADING EDGE/CROSSBAR JUNCTION.
11. ALL BOLTS, NUTS, AND WASHERS ARE (AN) AIRCRAFT TYPE.
12. SET UP AND BREAK DOWN TIME APPROXIMATELY 10 MINUTES OR LESS WITH NO TOOLS REQUIRES. GLIDER FOLDS INTO A TUBULAR FORM FOR EASY TRANSPORTATION.
13. 3.8 OZ STABILIZED DACRON SAILS (FINEST MATERIAL AVAILABLE) CUSTOM MADE BY A PROFESSIONAL SAIL MAKER, IN THE FOLLOWING COLORS:
WHITE, GOLD, SPECIAL GOLD, ORANGE, RED, PURPLE, DARK BLUE, LIGHT BLUE, LIME, GREEN & BLACK. SOLID COLORS OR ANY THREE COLOR COMBINATIONS PER GLIDER AT NO EXTRA COST. (DOUBLE ZIG ZAG STITCH ON ALL SAILS.)
14. GLIDERS AVAILABLE FOR PERSONS 70 POUNDS UP TO 240 POUNDS.
FOR FURTHER INFORMATION, CALL BOB POULES (413) 783-8260 OR