Soaring News

Vol. 2 Issue 2 "Newsletter of the Orlando Buzzards R/C Soaring Society" March 1997

CLUB OFFICERS

Don Cleveland, President (407) 696–7516
John Masiello, Vice President (407) 366–8918
Lewis Gray, Treasurer (407) 365–6766
Jerre Ferguson, Secretary (407) 295–0956

NEXT MEETING

April 6th, Noon at Club Field
May 4th, Noon at Club Field

President's Corner

Don Cleveland

Last weekend Dad and I were riding back from the FSS #2 contest in Fort Myers and we were talking about the contest and the results. (Just to let everyone know, I solidly placed in the middle of the pack both days just in case there was any question.) The discussion came around to the fact that of the eight Buzzards who attended the contest, six of them won awards. Congratulations to John (the Expert), Rich, Jerre, Jack, Scott, and Ed. That is a great achievement for those individuals, as they were flying against the best pilots in the state of Florida. In every contest conducted in the state, or even the Mid–South Contest, there is usually a large number of Orlando Buzzards in the winners' circle. We also have a number of very talented fliers in our club who do not normally compete in contests. What we as Orlando Buzzards have is a wealth of talent and knowledge at our disposal – OUR OWN MEMBERS.

I often get the opportunity to talk to new flyers about the Orlando Buzzards, and one topic I discuss (that means the most to me) is the willingness of everyone to share their knowledge with everyone else. I remember when I was a new flyer (not really that long ago), how all the club members would come to my rescue when ever I needed help. And I needed a lot of help. Some say I still need a lot of help, but I know if I have questions or need help in anyway, one of the Buzzards is there. Every week I learn something new from one of our group because they are willing to share their knowledge and experience. As an Orlando Buzzard, you should take advantage of your fellow club members experience and ask questions. We don't have a single member who wouldn't help another member in any way they could. It is that spirit of cooperation that makes the Orlando Buzzards organization so great.

As I was sending this to Terry, I had a call from one of the guest that came out to the field last Saturday. He was very "pumped up" about sailplanes and about the Orlando Buzzards. He said that he had recently visited a "power" club on the other side of town (boo) and that they were friendly–enough to him. But he also said that we were the ones that took the time from our flying to help him and the other club didn't; and he really appreciated our efforts. This is one of the reasons he is coming back to fly with us; BECAUSE WE TOOK THE TIME. There is a message there.

Don't forget that we host two Florida Soaring Society events on March 15/16 and April 19/20. I hope everyone has a chance to compete in these events. This is when we show the rest of the state that we not only have the best flyers, but we also host the most–enjoyable contests. These contests don't run by themselves. It takes a concerted effort on everyone's part to conduct a successful event. Even if you can't be there for both days, please try and come by to support your club by either flying or working (if not both) for at least one day. This year we only host two FSS events, so let's make them the best in the FSS series.

We have several new members and several members who are returning after several years absence. A special welcome to John, Chris, Dave, Bob, and Victor.

"Only dead fish have to swim with the stream"

Don

Contest News

FSS Contests #1 and #2 are in the history books. FSS#1 was held in Punta Gorda and hosted by the SouthWest Soaring Society. The only Buzzards to compete in FSS#1 were Larry Squire and Scott Hunt. Larry snagged first in Sportsman 2–meter and Scott pulled down second in Expert Unlimited. FSS#2 was held in Fort Meyers/Cape Coral area and many Buzzards not only showed up, but took home the hardware. The results are posted here, as well as on the Soaring internet address: **http://www.rcsoaring.com/flclubs.htm.** Congratulations to all who participated.

FSS#3 CONTEST VOLUNTEERS NEEDED. Working party for tent and winch setup will be Friday, March 14, at 3pm. REMEMBER, the contest site is through the second gate, right behind the previous contest site at SnowHill Road. (The area looks very good.) This is a great time to get involved with your fellow club members as well as get in a final trim flight after the work is all done. If you'd like to volunteer or get more contest information, contact Al Sorenson (407–658–0919) or Ben Cleveland (352–589–1866). Volunteers will also be needed for April when we host FSS#3, so plan ahead and signup early.

FSS#2 CONTEST RESULTS		
PLACE/CLASS	EVENT	NAME
1–Sportsman	2meter	JOHN MASIELLO
2–Sportsman	2meter	LARRY SQUIRE
3–Sportsman	2meter	BILL GRIER
1–Expert	2meter	SCOTT HUNT
2–Expert	2meter	B. BROCIOUS
3–Expert	2meter	RICH KIBURIS
1–Master	2meter	BRIAN SMITH
2–Master	2meter	DAVID ELIAS
3–Master	2meter	ED WHITE
1–Sportsman	Unlmtd	BILL GRIER
2–Sportsman	Unlmtd	FRANK COLLINS
3–Sportsman	Unlmtd	JACK LAWTON
1–Expert	Unlmtd	JERRE FERGUSON
2–Expert	Unlmtd	SCOTT HUNT
3–Expert	Unlmtd	JOHN VARGO
1–Master	Unlmtd	ED WHITE
2–Master	Unlmtd	BRIAN SMITH
3–Master	Unlmtd	DEREK KHAW

Future Contest Dates:

NEW DATES!!!

Mar 15–16	FSS#3, Orlando—2 meter/Unlimited CD: Ben Cleveland (904) 589–1866
April 19–20	FSS#4, Orlando—2 meter/Unlimited CD: Hank McDaniel (407) 831–3688
May 24–25	FSS#5, Morriston—2 meter/Unlimited CD: Ken Goodwin (904) 528–3744
June 21–22	Mid–South Championship, Huntsville HLG/2 meter/Unlimited. (Contact Don Cleveland for info and share travel)
June 28–29	FSS#6, West Palm—2 meter/Unlimited CD: Charlie Brecht
July26–31	AMA Nationals, Muncie, Indiana (see Model Aviation Magazine for info)
August 9	Annual, Orlando—Buzz Chuck HI G CD: Ed White
August 10	Annual, Orlando—Gentle Lady 2+2 (senior/junior team award too) CD: Rick Eckel
Aug 30–31	FSS#7, Morriston—2 meter/Unlimited CD: Ken Goodwin
Sep 21–22	FSS#8, West Palm—2 meter/Unlimited CD: Charlie Brecht
Oct 18–19	FSS#9, Morriston—2 meter/Unlimited CD: Bob Wargo
Nov 29–Dec1	Tangerine Championship, Orlando CD: TBA

ODDs-N-ENDS

☐ **OOOPs!** Yes, I have been informed that the newsletter had it's last technical error (again). The Web address for the contest dates was incorrectly typed as "RESORING..." rather than "RCSOARING...". I apologize if this caused any undue Web Searching.

☐ **NEW ROSTER.** Now that the 1997 membership renewal is complete, all addresses, frequencies, and email addresses have been compiled and published. Your copy is hidden inside this issue of Soaring News.

☐ **CONGRATULATIONS JOHN MASIELLO!!!** A First Place win at FSS#2 in Cape Coral pushed John over-the-top of Sportsman and into the Expert Class. John built a new wing for his Super Vee and is working hard to maintain his reputation as the "Thermal King".

☐ *****SCHEDULE CHANGE***** Due to another schedule conflict, the Annual Gentle Lady contest has been moved to Sunday, August 10th. Saturday, August 9th will be the Annual Buzz Chuck Hand Launch Glider Contest. Rick Eckel will have some format changes to keep things interesting. Please note the date change on your contest schedules.

☐ **THANK YOU JIM.** If you were at the February Club meeting you were treated to a great lecture and display of Composite materials by Jim Bradely of Bradely Manufacturing Products. Jim had some exceptional samples and explained some of the thought process behind using certain types of material. There were many questions that were answered, and lots of planning for future designs. If you missed it, plan on attending future meetings when more guests will be scheduled.

☐ **E-MAIL?** If you can receive email, please provide your email address to Lewis Gray.

☐ **NEED ASSISTANCE?** Did you know that our club has designated instructors to assist in building and flying your glider? Contact one of these people if you need help; they are ready, willing, and waiting.
Cy Baylor (407) 699-8750
Don Cleveland (407) 696-7516 / 281-2366
Rick Eckel (407) 365-9757 / 366-8852
Hank McDaniel (407) 831-3688

Your words could appear in SOARING NEWS! If you have news, safety issues, technical ideas, or equipment to sell, write it up and mail to:
SOARING NEWS
1471 San Carlos Ave
Deltona, FL 32738-9771
or email to: flyboy@bitstorm.net

Classified Advertisements

For Sale – Laser, without servos: $250.
or with servos-$500.
Call Ed White, 277-3862

HOBBY LOBBY DISCOUNT!! Hank McDaniel has a direct connection to Hobby Lobby (his daughter) and might be able to save you money. Call Hank, (407) 831-3688

Custom Glider Design and Building. Call Mark Kummerow for price quotes and delivery dates. (407) 676-5477

MORE DISCOUNTS!! Bob Burns has a friend that distributes adhesives and other hobby items at deep discount. Contact Bob, (407) 366-4886

WHERE TO FLY

by Frank Weston, Weston Aerodesign Company

This article is extracted from the WACO web pages (http://www2.ari.net/home/wwwhome.html) and is reprinted with permission. This is a MUST–SEE page.

Being in the right place at the right time is paramount in the world of thermal duration. Let's examine the list of "where to be clues" in their descending value to you as a competition pilot.

Where to Fly Relative to Other Competitors. The clues given by other competitors are not easy to miss or difficult to interpret, but there are some dangers, the most deadly of which is herd instinct. The desire to go where everyone else goes is very strong in humans. In soaring this desire must be controlled. Usually if a group of planes is circling, they're in lift, and it is a good bet to join them. But be cautious! If the pilots are all herd animals, and if the lift is marginal to negative, the situation frequently arises where three, four, or even more planes are all circling in down air. All of these pilots are secure in the knowledge that they are circling where everyone else is. They are losers. Don't get sucked in to joining them just because there is a crowd. Look, but go only if everyone really is going up, and only if they are within reach. Trust your own eyes and judgement. Consider this: if the crowd is in neutral air or going down, valuable intelligence is still to be gained. Stay away from them but look for signs of lift downwind of their location. Usually the herd picks a spot where there is lift and stays there long after the lift has moved on.

The antithis of the herd animal is the lone wolf. This guy avoids the herd, even if it is rocketing skyward at Mach 5. He feels that any lift that he doesn't find all by himself is tainted. This guy never wins contests. Don't be a lone wolf or an ungulate. Be an opportunist. Take the easy pickings when they come along. In any decent contest you'll have plenty of chances to demonstrate your real skill before the fat lady sings.

It is very important to know your competition. Some guys are always worth following, some never. Some guys can find and fly in lift that will do you no good, some are so rough that it is impossible to read the air they fly through. The more you watch other competitors the more you learn about the air, and about them as sources of intelligence. When the good guys are itching to get to a winch, you should look around and find out why. When they're hiding in the parking lot, there is also usually a reason. If you are on a road trip, find out who the good local flyers are, then watch them. A little "local knowledge" can go a long way. These guys fly this field all year long. Chances are they know the spots that work.

If your competition is higher than launch height, he had to get there by flying in lift. Look for it. If your competition is higher than you, the column of lift he is in is usually upwind of him at lower altitude. Start your search upwind of his position. If he is lower, start downwind. If he is very, very much higher than you, chances are the lift has already gone. Make one pass through the likely area, then get away quickly if you don't find something. Big sink frequently follows strong lift. Use your ears as well as your eyes. If your competition is singing "Born Free", chances are he has found big lift. If he is muttering obscenities or talking in panicked tones to his timer, stay away from his quadrant of the sky.

Where to Fly Relative to Wind Direction. It is common knowledge that the streamer on your antenna will usually point to a thermal if there is one around. For example: If the wind has been steady, then suddenly there is a lull, or even a 180 degree shift, chances are there is a thermal moving in upwind. If your streamer begins to point left or right from average, chances are there is some thermal activity in the direction it is pointing. The streamer provides good information, but don't rely on it for all of your decision making. Sometimes you are too far away to take advantage of the information. If your plane is a half mile away to the left, and suddenly your streamer moves right, don't waste time chasing it. Sometimes the information itself is erroneous. On gusty, turbulent days, the wind direction can shift all over the compass and indicate nothing of real value.

Did you ever notice that all of the really good pilots seem to end up way downwind on most of their flights? Moreover, the windier the day, the more they tend to head straight downwind right off the launch. Didn't notice? Well, you should have, because there are some very, very good reasons to start a thermal search downwind. Reason number one: If you have been paying attention prior to your launch, you already know what conditions exist downwind. You have very few clues as to what's upwind. The Devil you do know is better than the one you don't. If the air prior to launch has been still, start your search overhead or downwind. If a major thermal came through within a minute prior your launch, go downwind to get it. DANGER!!!!! If a really big thermal comes through, and if it is moving fast, think twice before

chasing it downwind. Really big, fast moving thermals leave nothing but down air in their wake, and unless you catch them you will be very low, very quickly, and land out very far downwind. In this situation, the best course of action is to find something wrong with your radio just before launch and take about five minutes to fix it. Reason number two: Light lift is easier to detect if the airplane is downwind. An airplane upwind is usually flown at a higher angle relative to the horizon than one flown downwind thus the horizon is of less use as a reference. Further, the upwind airplane drifts downwind increasing the angle relative to the horizon and giving a false impression of slight altitude gain. A downwind airplane always looks to be in trouble, and the lightest lift is far more readily detected. Reason number three: The WACO Theory of Thermal Lines of Flux which proves that you are more likely to find lift flying downwind than flying upwind. Assumptions (acknowledged as facts by most soaring pilots): Thermals are generated by randomly distributed sources such as roads, parking lots, automobile junk yards, large open dry fields, etc. On a good day, these sources will generate thermal after thermal at a cyclic rate determined by the amount of energy falling on the source, and the velocity and physical properties of the air moving over the source. Thermals move away from their source at a rate proportionate to wind speed and vertical speed of the thermal. As thermals move away from their source and gain altitude, they become stronger and larger until they reach an inversion layer or the stratosphere. Smaller lower thermals also tend to join other smaller low thermals to become bigger higher thermals. There is a minimum altitude at which a thermal can be detected and worked, and this minimum altitude decreases as wind increases. It is better to encounter a bigger thermal higher than a smaller thermal lower.

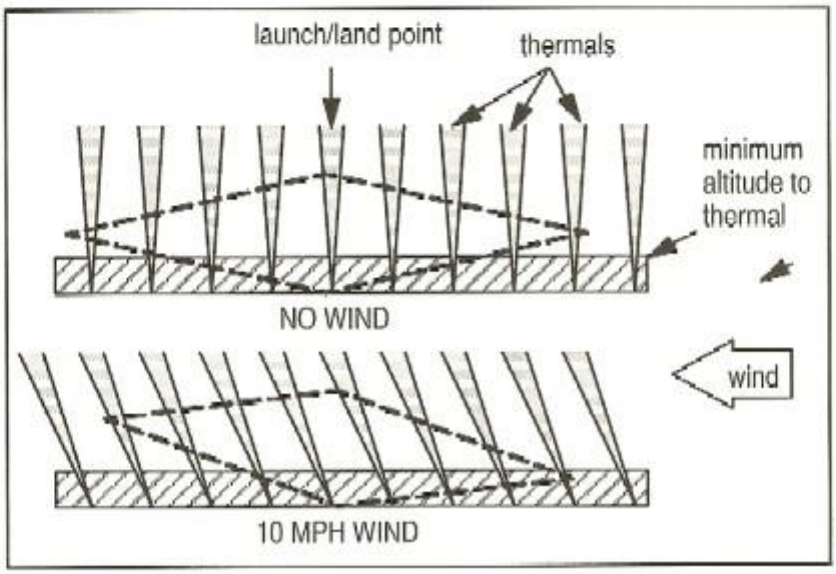
The thermal source can shed rising air bubbles at a rate ranging from nearly continuous to once daily. The rate at which the air bubble rises and expands is determined by the physical properties of the atmosphere and by the amount of energy contained within the rising air bubble or column. The direction in which the rising air moves is determined by the wind , the vertical speed of the bubble, and probably coreolis force, which for our purposes is not considered.

If illustrated, thermal sources would be randomly distributed, vary greatly in size, and often joining smaller thermals to create larger ones. Thermals can also generate at different rates with less–than uniform movement and joining.

The figure below illustrates the meat of the theory. A sailplane with a 20 to 1 glide ratio at 20 knots is assumed (flight path is the dark dashed line). All thermals are going up at 5 kts. A minimum useable thermal altitude is assumed at 60 feet for no wind (the top picture), 75 feet for 5kts of wind (not shown in figure) , and 90 feet for 10kts of wind, (the bottom picture). Scale has been compressed along the X axis for clarity. Wind is blowing from right to left.

In the no wind conditions our sailplane will encounter the same number of useable thermals flying in any direction. Eight thermals are encountered.

In a 5kt breeze, flying upwind our sailplane will encounter five thermals, while going downwind, seven useable thermals will be encountered. This is only part of the story, since the thermals downwind will be encountered higher where they are wider, and stronger. The ratio of encounter downwind to upwind is 1.4.



Similarly, in a 10kt wind, maybe four (or less) useable thermals are encountered going upwind, while six are encountered going downwind. The ratio of encounter downwind to upwind is 1.5. It would appear that the ratio of success downwind to upwind increases with wind speed!

Theory: The probability of encountering a workable thermal (given no other indications) is greater flying a downwind search pattern than flying an upwind pattern. The ratio of downwind to upwind probability of success decreases as wind strength decreases and is equal to one in zero wind conditions.

Reason number four: Most contests are held at the biggest, most level, most clear, most sun–drenched field around. The field itself is probably the best source of thermals for miles. All of the thermals generated by the field on which you are standing will be either overhead or downwind. Except in the Midwest where fields are delineated only by other fields, fields are usually defined by a vertical barrier of some kind such as a tree line. It is impossible to fly an upwind tree line effectively. If you fly downwind, the downwind tree line is always available for some last minute scratching. A good pilot can lurk for minutes at 50 to 100 feet on a downwind tree line and wait for a thermal to break from the field. Try that upwind!

Where to Fly Relative to Your Own Position. Don't fly over head unless you are carried there by a thermal! Lift is very difficult to detect when your plane is directly overhead; thus, a search pattern which passes overhead is not usually a good one. Further, looking straight up is a pain in the neck. If lift is overhead, you will want to fly in it, so if the lift overhead is not moving away, try moving yourself away.

Don't fly straight away or toward yourself when looking for lift. It is very difficult to see the plane, much less detect lift when viewing from end–on. The best search pattern is one which gives you a good side or quarter view of the model for most of the time.

Where to Fly Relative to Previous Experience. If you had luck in a particular spot before, chances are you will find lift there again unless some major variables have changed. On your first launch you should consider the conditions and fly what you think is the search pattern with the highest probability of success. If you find lift, try the same search pattern on subsequent flights. If you have no success, next time out (unless there are indicators to the contrary) fly a different search pattern. For example: you know you want to search downwind to a tree line. If, on your first flight you go left and find no lift, next time at the winch, instead of running downwind to the left, try it to the right.

Where to Fly Relative to Geographical Features and Natural Thermal Indicators. Geographical features which you should look for include: Roads, parking lots, rocky or dry fields, junk yards, tank farms, residential areas, and any other piece of real estate which has the capability to heat up under direct sun. Certain features are of more value during different times of the day. A hillside which receives the direct rays of the morning sun will be among the first locations to begin shedding thermals. This same hillside may be useless in the afternoon. Rocky or sandy areas may take longer to heat up, but will release stored heat late into the afternoon. Late in the afternoon on still days, wooded areas sometimes release weak thermals. Topographical irregularities such as tree lines, tall corn, steep hills, buildings, and anything else which will cause air to be disturbed can not only be good spots for slope lift, but also seem to be a catalyst for thermals.

Natural thermal indicators include smoke, dust, and air borne plant material. Also included are zoological–type indicators such as birds and insects. Thick smoke from fires and dust devils going straight up are pretty obvious indicators, less obvious are little items like dandelions and other airborne seeds. If these materials are floating around in the air over your head, something had to put them there. There are those who claim to be able to see thermals, and I don't believe they are all crackpots. Under certain circumstances, a hazy tint to the air can indicate the presence of lift. Call me crackpot if you want, but I have seen and used contrasts in sky color to find lift. I think these slight differences in color are caused by debris which has been borne aloft by thermal activity, or are the initial stages of condensation to form a cloud. Clouds themselves can be indicators, in fact, cumulus clouds are the direct and visible result of thermals rising. Usually (but not always) the clouds themselves are too high and/or too far away to do any good as a thermal marker, but the passage of a band of clouds can indicate a general up–cycle, and a zone of clear blue sky can indicate some serious down air.

Birds, like other competitors, are obvious indicators of lift. The best birds to watch are usually swallows or the like which swarm around insects being carried aloft by thermals. This type of bird is best, because they are there when the thermal is and gone the minute the thermal dissipates. They are a visible outline of the thermal. Buzzards and hawks, on the other hand, seem to hang around even after the lift is gone. Pay attention! If the buzzard is circling, chances are there is lift, but if Mr. Buzzard is flying straight and level, beware. Hawks calling to their mates are often a good thermal indicator. Usually you hear the call before you see the hawk, and it has been my experience that when they are calling it is when

(or because) they are in lift. Look for the source of the noise. Seagulls are the worst of all birds for indicating lift. They're so efficient, they can make down air look good. Worse, they tend to circle over landfills and dumpsters, over farmers plowing fields, and any other source of food, but not necessarily lift.

Thermal tip from Country Bob: It is a little known fact that cows usually stand with their tails to the wind. Feeding birds also hang around cows to chow down on the insects the cows attract and/or stir up. The cow/insect/bird combo can be a potent weapon in the search for thermals. The cows indicate wind direction and shifts, and the birds chase insects up into the lift. Just remember, cows always look at lift.

Summary. If there are obvious and reliable indicators of lift, and if you can get to them with acceptable risk, go there. If there are no obvious indicators, but if you have had success in one area before, look there first. If there are no other indicators, search downwind, in a pattern that takes the plane to your left or right so that you have a good side or quarter view of the model. Look and listen, pay attention to wind shifts, other competitors, birds, insects and cows.

LSF REPORT CARD

As club members attain new levels in the League of Silent Flight (LSF), the results will be posted here. To participate, see the LSF web site at *http://ourworld.compuserve.com/homepages/calplst* or get a mailer from one of the members listed below. LSF membership is free and processing of achievements is only $2.00 each. Congratulations to the following members for their accomplishments.

Level I Graduates: Don Cleveland, Ben Cleveland, and Bill Townsend
Level II Graduates: Several people finishing-up requirements now.

This is your space. Do you have information to share with the other members?

ORLANDO BUZZARDS PREPARE NEW WEB SITE

The access to "on-line" services is growing and Orlando Buzzards continue to be on the leading edge of Technology. John Masiello is plugging away in a deep dark electronics lab somewhere in Orlando, preparing the Club's first venture into the "World Wide Web". For those who may not understand all this computer jargon, let's just say that this is a major leap in world-wide distribution of soaring information. It will soon be possible for a soaring enthusiast in Japan to read what the Orlando Buzzards are doing. I have reviewed the homepage and am very impressed with the John's work; it has a thermalling glider; a beautiful cloud background; and even a live link to the local weather! A Special THANKS to John for his efforts, and to Ingo Donasch for the use of his company server which provides the FSS Homepage.

It's Springtime, Let's go flying!!!

Soaring News
1471 San Carlos Ave
Deltona, FL 32738–9771