



Seaside Beach Glider Fly



The annual beach glider fly at the cliff in Seaside was well attended as seen from the photo above. More flyers came after this picture was taken. As is often the case at the beach there was a couple of hours of waiting for the wind to blow strong enough from the right direction.

Around 2:00 PM the conditions were fairly good for the floater type gliders. Our intrepid leader, Malcolm Beety, flew often to check the lift.

Flying along the cliff in a fairly restricted air space is risky, particularly when there are several gliders vying for the same air space. Malcolm Bruce and Manny Casquilho took big chunks out of

each other's wing leading edges when they fought for the same space. Fortunately the gliders didn't lock together and both airframes were safely recovered, although Manny had to go down to the beach to retrieve his.

Joe Francis was a first time glider pilot. He found one of his dad's gliders and took to slope soaring like the true sailor that he is! It was great to have Manny and Rick Maida join us!

Watch the newsletter for possible additional beach soaring activities. See page 7 for more pics.

By your Editor

President Says



I Hey Ya'!!, it's that time of the month again: it's time for some words of wisdom from your humble Pres, ME!

To start with, I want to say that we all are with Jack Jella and his family. Irene Jella has passed on after a period of health challenges. For those who knew her, she will be missed. For folks who did not know Irene, you missed knowing a FABULOUS person. I want Jack and his family to know we will all have them in our prayers.

Our first Electric Fun Fly is now over. We had a small turnout of 14 pilots and maybe 25-28 aircraft. But the weather was one of the BEST days I've ever seen out there. Planes were flying all morning and as late as 3 PM. The food was SECTACULAR! Dennis Stanley and his friend Jane did a Great job of feeding us.

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PRESIDENT SAYS (CONT. FROM PAGE 1)

They made us REAL hamburgers, pasta salad, and a REAL potato salad. Of course I supplied a pot of chili beans. There was no shortage of food. We had a BLAST! We're gonna do it again next year, same time, same place.

The first glider event also is now history. I made an appearance but not to fly. I'm sure someone else is writing a report on this event. Maybe after I get my cub finished I'll build a glider and you guys can help me learn to fly one.

The first Field Cleanup Day is on March 25th. As we keep stressing, PLEASE do not come out that morning expecting to fly (unless it's pouring down rain, then we won't be cleaning up and you can fly). This is for the safety of those of us working. If you want to fly that day, come help us do the cleaning, get a FREE LUNCH, then after 1:00 PM you can fly.

Upcoming events will be: April 7-9th at Lake San Antonio will be our first Float Fly and on April 21-23rd will be the Second Annual Bob Francis Memorial Fun Fly. We will be having lunch both days (need some folks to cook and serve PLEASE), a BBQ dinner on Saturday evening, plus coffee and diet pills (I mean donuts) both mornings. We'll also be holding a silent auction, so if you have any neighborhood kids that bother you, we'll be auctioning off some aircraft art that was donated by Cindy Miller to the club.

The next event will be on May 5-7th at Lake San Antonio for our second Float Fly. If you have never been to one of these float flies, you need to come and experience the fun of having the largest landing strip you can imagine. THEN, the next event will be the FIRST RudderGate of the year with Chuck and Jennie

Bosso hosting the event. They do a First Class job of feeding us, so BE THERE—May 21st!

On June 25th we will be replacing the RudderGate with our club's 30th Birthday Party. This event will be catered so our members do not have to work that day. We will have flying, food, association, and at noontime, during the feed, we will allow members to speak about how long they have been in the club, how long they took to solo, and anything of special memory of the club they have. This will be the one and ONLY time the club will turn 30, let's ALL come together and enjoy together!

Our next club meeting will be at The Landing Zone at the Salinas Airport. Helen and James Klamas have really been treating us Great! We have the use of their back dining room, beverages and calorie free snacks. We have the room for Show and Tell, the ability to have a TV or a projector for showing movies. PLUS, you can come early and have a SPECTACULAR meal!

Lastly, I want to remind you all that we NEED to support the local hobbyshops we have. SRS Hobbies in Salinas, Capitola Hobbies in Capitola, Hobby World in Gilroy, D&J Hobbies in Campbell and Sheldons Hobbies in San Jose. SRS Hobbies and Hobby World are waiting for you folks to make suggestions of what to stock. I will be passing a request sheet at the upcoming events for you to write down some suggestions. They both carry a lot of our basics, but they want to carry more of our needs.

I hope to see MORE of you at the upcoming meetings,

HAPPY LANDINGS TO ALL, AND TO ALL A GOOD NIGHT!

Jim "CRASH" St. John, President

New Soloed Pilot

Saturday, March 4, one of our new members, Jay Beck, soloed flying his Ryan OS Max Special. Jays says the airplane has been in his closet for 20 some years. Jay was on the buddy cord with Randy McGregor for only two sessions before he soloed. According to Randy, on the second dual session he never took control from Jay. Jay says he has been flying the simulator provided with the P51 PTS regularly for over a month. Looks like his diligence paid off. Congratulations, Jay.

Next Newsletter Deadline April 15, 2006

Send your contributions to John Midgorden,
Editor

<http://www.jomidge@earthlink.net>

or Phone (831) 633-4026

Minutes of the March Club Meeting

The The March Club meeting was called to order by President Jim St. John at 7:35 PM at the Landing Zone Restaurant in the Salinas Airport Terminal building. There were twelve members present.

Bob McGregor gave a financial report.

Old Business

President St. John reviewed the Board actions with the members present. Jack Jella reported that he had been contacting several of the long time members of the club who have not been active recently to tell them about the 30th Anniversary celebration in June.

Dennis Stanley reported on the Electric Fun Fly event held the end of February. He was disappointed with the turn out of thirteen registration, but those present had a good time and the weather was exceptional. As usual, there were some guys who showed up to fly their gas models who hadn't read their newsletter or looked at the bulletin board at the field.

Because of the problem of guys not reading their newsletters, Dennis suggested that the club put up a marquee board at the entrance. The marquee would have provision to put up letters announcing events as well as welcoming people to the field. Dennis volunteered to construct the marquee. Bob McGregor moved, Jack Jella seconded, that Dennis be authorized to look into this project and report back to the club.

New Business

Fighter Factory Tour: Jack Jella reported that he had been in contact with Cal-Pacific Aeromotive for another tour of the fighter factory located at the Salinas Airport. After discussion the date of June 10th was suggested and Jack agreed to confirm the date with the Cal-Pacific.

Show and Tell

Jim St. John brought the tail feathers of his 1/4 scale Cub to prove that he is working on it.

Alan Brown brought his Lincoln Beachy Little Looper again to show his progress since the February meeting.

Dennis Stanley brought a new spread spectrum radio system for park flyers and explained how the new system works.

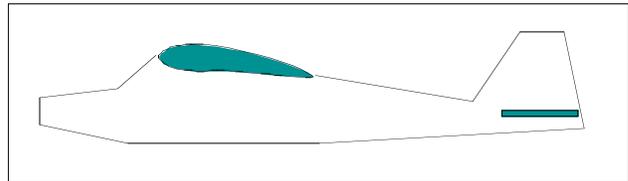
Program

Alan Brown gave a lecture on airfoils around the two part article that had been published in the newsletter the past two months.

Respectfully John Midgorden, Secretary

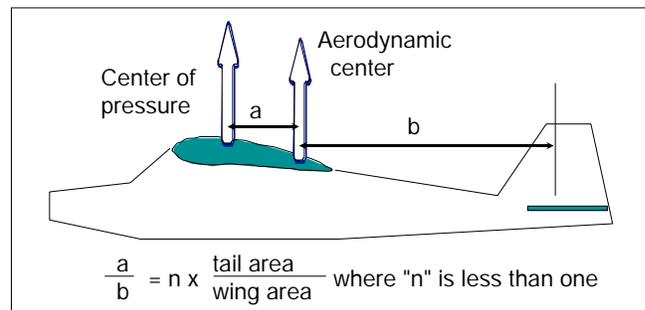
HOW AIRFOILS WORK—PART THREE

Let's look at how tails work and then see if we can explain some of the phenomena that we might observe at the flying field. Let's start with a very conventional and stable layout - a high-wing airplane with a flat-bottomed wing section and a tailplane at a smaller angle of incidence with a symmetrical airfoil section. It looks something like this.



The wing is at a big enough incidence that it can lift the weight of the model in level flight. The tail is sitting at zero incidence and so isn't contributing any lift. It may even be contributing some negative lift because of downwash from the wing, but let's neglect this for the moment. As the wing center of pressure (or center of lift) acts at about the 25% chord point, then in order to balance, the c.g. will also be at 25%. Now imagine that the airplane pitches nose up for some reason. The wing generates a little more lift, which will cause the airplane to rise somewhat, but it's still at 25%, so it won't pitch the airplane. The tail, however, now has some positive lift, which makes the airplane rotate nose down, getting it back to where it started. Conversely, if the airplane pitches nose down, the tail produces negative lift and pitches the airplane nose up. Clearly the airplane is stable in pitch.

Now I want to differentiate between **center of pressure** and **aerodynamic center**. These are sometimes used interchangeably in the model airplane press, but that's not correct.



The center of pressure is the point where the net lift of the airplane acts and in steady level flight has to be at the same place as the c.g. of the airplane.

However, if we rotate the airplane to a new angle of attack (incidence angle is how we rig the airplane, angle of attack is the angle the airplane presents to the airflow at any point in time), then we'll get some incremental lift from the wing acting at its own center of pressure and some from the horizontal tail at its own center of pressure. The extra lift will act somewhere between the wing and the tail at the aerodynamic center. That point will be given by the ratio of tail area to wing area multiplied by a coefficient less than one, as shown in the illustration. The coefficient will depend on the aspect ratios of the two surfaces and the downwash from the wing. The smaller the ratio between tail aspect ratio and wing aspect ratio, and the greater the wing downwash at the tail, the smaller will be this coefficient.

Depending on how we set the initial tail angle, we can obviously have the tail, at normal flight speed, either help to lift the airplane or give negative lift. In the former case, the c.g. will be aft of the 25% chord point, and in the latter case it will be forward of the 25% point. The position of the aerodynamic center, however, does not change. Suppose we trimmed the airplane with the c.g. right at the aerodynamic center, then the airplane would be neutrally stable (there'd be no pitching moment relative to the c.g.), but conversely we wouldn't need any change of trim to fly faster or slower. Any small elevator movement would result in a rapid response because the extra wing lift acting at its own center of pressure gives a very strong pitching moment. So, as we all know, moving the c.g. back allows us to trade maneuverability for stability, or allows us to have smaller control surfaces, but still with lower stability. The reverse happens if we trim with the c.g. forward of the 25% point.

If we fly the airplane a bit faster, it will need a smaller wing angle of attack, which results in a negative tail angle. We'll have to add some down elevator to keep the airplane trimmed, otherwise it will want to pitch up. Conversely, if we want to fly more slowly, we have to add up elevator to keep trimmed. For simplicity I haven't included the effects of thrust line position and the increased or decreased thrust required to maintain the speed we want.

Now let's look at what happens when we get to the stall. The wing now loses lift at some specific angle depending on its aspect ratio. If the tail has a lower aspect ratio, then it will stall at a higher angle and so should keep on lifting after the wing's lift is falling off. This is good news because the airplane will be super stable in the stalled configuration. The tail's angle of attack isn't completely obvious because it is affected by the wing's flow field. If it is fairly close to the wing, then the flow field will be affected by the downwash and the tail will act as if it has a lower angle of attack than it really has.

However, suppose the tail is several chord lengths behind the wing and has a higher aspect ratio than the wing. Now it will stall before the wing stalls, and the airplane will have a dramatic pitch up near the stall (translation: on landing approach!).

O.K. so now we know how to avoid low speed pitch up. Keep the tail aspect ratio substantially less than that of the wing. But suppose we have a canard airplane. These aircraft are noted for their forgiving stall characteristics, because the canard is trimmed at a slightly higher angle than the wing and so will stall first, allowing the airplane to drop its nose before the main wing stalls. However, if we put a conventional low aspect ratio tail surface at the front end it will keep lifting after the main (high aspect ratio) wing has stalled. Bingo, we're back to pitch up on the approach. This is why most self-respecting canard aircraft have higher aspect ratio canard surfaces than the main wings. So the rule now becomes, regardless of the relative sizes of the front and back surfaces (canard, tandem or conventional tail), the front surface should have higher aspect ratio than the rear one to avoid low speed pitch up.

Swept wings are not more prone to wing tip stall than straight wings. It just seems that way because they often have higher taper ratios. However, if a swept wing does stall at the wing tips first, then this is just like a tail stalling before the main wing - low speed pitch up. So the effects of tip stall on a swept back wing are more dramatic than for a straight wing. Conversely, a swept forward wing is almost guaranteed not to pitch up if the tips stall first. It's thus no surprise that the X-31 research aircraft designed to research post-stall characteristics has swept forward wings.

One more thing. Despite the tendency of low aspect ratio surfaces to stall at higher angles of attack, we can still screw things up by putting a horrible airfoil section on them so that they will get flow separation at a fairly low angle of attack. A good example would be a tail made of 1/4" sheet balsa with absolutely no leading edge streamlining. This again becomes an airplane asking for drastic pitch instability at low speeds, particularly if it's teamed with a very fat wing which will not tend to have premature flow separation. We have probably all seen examples of model airplanes with these very scary characteristics.

In a later article, we'll show how to determine where the aerodynamic center is, and where to put the center of gravity (c.g.)

by Alan Brown

SAM Calendar

May

- 3 Board/Club Meeting Salinas Airport
- 5-7 Float Fly Lake San Antonio
- 21 RudderGate SAM Field

June

- 3 Glider Contest SAM Field
- 7 Board/Club Meeting Salinas Airport
- 10 Fighter Factory Tour Salinas Airport
- 24 Field Work Day SAM Field
- 25 RudderGate SAM Field

July

- 1 Glider Contest SAM Field
- 5 Board/Club Meeting Salinas Airport
- 15 Memorial Fun Fly SAM Field
- 30 RudderGate SAM Field

August

- 2 Board/Club Meeting Salinas Airport
- 5 Glider Contest SAM Field
- 27 RudderGate SAM Field

September

- 6 Board/Club Meeting Salinas Airport
- 9-10 IMAC Contest SAM Field
- 23 Field Work Day SAM Field
- 24 RudderGate SAM Field

October

- 4 Board/Club Meeting Salinas Airport
- 6-8 Float Fly Lake San Antonio
- 21 Electric Fun Fly SAM Field
- 29 RudderGate SAM Field

November

- 1 Board/Club Meeting Salinas Airport

December

- 2 Toys for Tots Fun Fly SAM Field
- 2 Annual Dinner Landing Zone Restaurant

NCRCS Calendar

I have only included NCRCS listing that may be of interest to SAM flyers. The complete calendar is at the field.—Editor

April

- 8 Swap Meet @ Fresno Radio Modelers, Fresno, CA
- 8-9 Float Fly @ Woodland-Davis, Davis, CA
- 15 Inter-club Fun-Fly @ SCCMAS, Morgan Hill, CA
- 21-23 Bob Francis Memorial Fun Fly @ Salinas Area Modelers, Chualar, CA
- 22-23 IMAC @ Wavemasters, Hollister, CA
- 29-30 IMAC @ Tucson, AZ

May

- 6-7 49er Scale Masters Qualifier @ Woodland-Davis, Davis, CA
- 12-14 IMAA Giant Scale Fly-In @ FRM, Fresno, CA
- 20 Race for Gold Warbird Race @ SCCMAS, Morgan Hill, CA
- 20 Electric Fly-In @ SACRC, Union City, CA
- 25-29 Rally of Giants @ Castle Airport, Atwater, CA

June

- 3-4 IMAC @ R/C Flyers Unlimited, Oakdale, CA
- 10 Float Fly @ Woodward Reservoir, R/C Flyers Unlimited, Oakdale, CA
- 24-25 Giant Scale Fly-In @ SCCMAS, Morgan Hill, CA
- 24-25 IMAC @ Whittier, CA

Watch this space monthly for the more of the NCRCS calendar.

For Sale

Mel Avery of the Santa Cruz RC Bees has donated a kit to their club. It is a Lanier 1/3 scale (96" wingspan) new-in-box. It is a kit, not an ARF. It is priced at \$110 (new from Tower Hobbies is \$229.99).

Call Alan Brown at 831-685-9446 if you are interested.

Electric Fun Fly - Feb. 25th



Dennis Stanley, CD



Gary Sobak



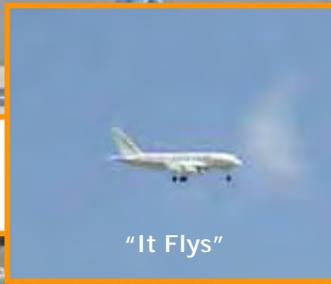
Keeping Warm



Jr. Birdman, Jack Jellá



"Tower, A-380 Ready for Take off"



"It Flies"



Kyle Matthew's A-380



Jack Tossman's Unlikely Air Force

A-380 Photos by
Kyle Matthews

All other photos by
Jim St. John



Visitor's Fleet



Watch Your Toe, Malcolm

Seaside Beach Glider Fly - March 4th



Contact Information and Calendar

OFFICERS

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Sec. John Midgorden	633.4026	
Treas. Bob McGregor	422.3049	

SAM INTERNET SITE

BOARD MEMBERS

Malcolm Beety	393.9304
Dale Oxford	663.5066
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FIELD MAINTENANCE

Malcolm Bruce	449.4471
Malcolm Beety	393.9304

Coming Events

April 5, 2006

March Board Meeting	6:30 PM
March Club Meeting	7:30 PM

April 7-9, 2006

Float Fly	Lake San Antonio
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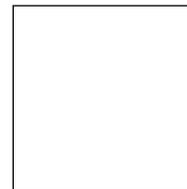
April 21-23, 2006

Bob Francis Memorial Fly In	Sam Field
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Don't forget!

The Board and Club meetings are now held at the Landing Zone Restaurant at the Salinas Airport.

Salinas Area Modelers, Inc.
 P. O. Box 6351
 Salinas, CA 93912



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