





Volume 20, Issue 9, September 2005
A Monthly Publication of the Pine Mountain Lake Aviation Association

# **Test Pilot Brian Binnie**

# Making History with SpaceShipOne

ABOUT OUR SEPTEMBER 10, 2005 GUEST SPEAKER

Brian Binnie is a Program Business Manager and Test Pilot at Scaled Composites, based at Mojave Airport, the first FAA



licensed Spaceport. He has 21 years of flight test experience including 20 years of Naval Service in the Strike-Fighter community. Brian has logged over 4600 hours of flight time in 59 different aircraft and is a licensed

Airline Transport Pilot.

Brian's educational background includes a Bachelor of Science degree in Aerospace Engineering; a Master of Science degree in Fluid Mechanics and Thermodynamics from Brown University; and a Master of Science in Aeronautical Engineering from Princeton University. Brian is also a graduate of the U.S. Navy's Test Pilot School at Patuxent River, MD and the Naval Aviation Safety School at Monterey, CA. He is a member of the Society of Experimental Test Pilots and a published member of the American Institute of Aeronautics and Astronautics.

As a naval aviator, he learned to fly everything from fighter jets to transport planes to helicopters. During Operation Desert Storm, Brian flew thirty-three combat missions in his FA-18. After leaving the military, he joined Rotary Rocket, a company that attempted to build a commercial space vehicle by attaching helicopter propellers to the top of a rocket. Brian guided the bizarre-looking craft down a California runway, but the project ran out of funding. He then joined famed aerospace designer Burt Rutan at Scaled Composites, where he would make history.

# SpaceShipOne Breaks the Sound Barrier

On December 17, 2003, the 100th anniversary of the Wright brothers' first powered flight, Brian Binnie was at the controls of *SpaceShipOne*, as it broke the sound barrier over the California



desert, reaching 68,000 feet. This was the first supersonic flight by a private company operating independently of the government. It was an important milestone in the company's effort to win the X Prize, a \$10 million competition to build a spaceship capable of carrying

three people to an altitude of sixty-three miles, return safely to the ground and repeat the flight within two weeks.

SpaceShipOne Surpasses 100 Km on First X-Prize Flight SpaceShipOne coasted above the 100 km altitude point on September 29, 2004 and successfully completed the first of two X-Prize flights. The peak altitude reached by test pilot Mike Melville was 337,500 ft.

# Brian Binnie Captures the X-Prize with SpaceShipOne



On October 4, 2004, SpaceShipOne, piloted by Brian Binnie, rocketed into history, becoming the first private manned spacecraft to exceed an altitude of 328,000 feet twice within the span of a 14 day period, thus claiming the ten million dollar Ansari X-Prize and setting the stage for civilian space flight.

# **A Second Record Shattered**

In addition to meeting the altitude requirement to win the X-Prize,



pilot Brian Binnie also broke the August 22, 1963 record by Joseph A. Walker, who flew the X-15 to an unofficial world altitude record of 354,200 feet. Brian Binnie took SpaceShipOne all

the way to 367,442 feet or 69.6 miles above the Earth's surface.

# **History Continued**

The Ansari X-Prize, founded in 1996, was modeled after the Orteig Prize that Charles Lindbergh won in 1927 by flying solo across the Atlantic Ocean. The October 4, 2004 SpaceShipOne flight was timed partially to coincide with the 47th anniversary of the Soviet launch of Sputnik.



The Pine Mountain Lake Aviation Association is privileged to welcome the remarkable Brian Binnie on Saturday, September 10, 2005, 6:00 p.m., at the Buchner Hangar, 20885 Hemlock Street at Woodside Way, Pine Mountain Lake Airport.

# PRESIDENT'S MESSAGE

ur Oshkosh trip was a roaring success, clear weather both going and returning. The major thunderstorm on our first night provided an awesome light-show from inside our tent. Little did we know that there was a tornado warning about the same time. The next few days were rain free with mild temperatures. I hitched a ride along with Mick Hopson and Mikie Carbon riding in Mick's 206. By the time we were ready to leave OSH there was some concern about the quantity of all the extremely valuable tools and parts we had purchased. It only took two of us to close the baggage door, and as they say about 206's, if you can ever close the door, the plane will fly. The 206 has just one speed, by the way, empty is 130, fully loaded is 130. If you are looking for a true four-place airplane, take a long hard look at the Cessna 206. Remove the 5<sup>th</sup> and 6<sup>th</sup> seats, add full fuel, four good size people and all the baggage you can stuff in it and watch it go.

Have you made plans yet to join us for the September 18<sup>th</sup> fly out to Santa Ynez/Solvang (IZA)? The plan is to make a lunch and shopping trip down for the day, but you can also go down the day before and stay overnight. Having visited Solvang many times I can tell you that it is really worth the trip; it is a cute town with lots of stores and shops to keep the gentle sex occupied. If we get enough folks signed up we can get a van to provide transportation to and from the airport. Please contact Mick Hopson (6290) for more details or to sign up. Please join us; it will be a lot of fun.

On September 10, PMLAA joins with EAA to sponsor Community Aviation Day at the PML airport. Please volunteer, get involved, and come on out to help show the wonders of aviation to our neighbors, and especially the local school kids. Call Rand Siegfried for more information.

Per our Bylaws we need to appoint a nominating committee to nominate next year's club officers. I have asked Paul Price to head up the committee and to select two other members in good standing to help him. Some of you might now be pulling the window shades and adding Paul's phone number to your caller ID blocking system, but you would be missing out on a wonderful opportunity to help out your club. I hear over and over from both members and non-members, that the PMLAA group has the most fun and is so well organized. Compliments like these only happen because we have a high caliber of volunteers, so stand tall, be proactive and give Paul a call and offer to get involved. You might as well as he will hound you to death if he wants you anyway and I speak from personal experience.

Until next time, let's fly safe and quiet out there!

Mike Gustafson

# SOCIAL NOTES

The are so fortunate to have such dynamic and memorable speakers each month as Bud Anderson. What an honor to hear him speak. We were fortunate to see him in Oshkosh also.

Speaking of Oshkosh, It could not have been better. The weather was perfect. We had an absolutely, positively great time and saw many PMLAA friends there. Kent and Sandy Blankenburg received a Bronze Lindy award for their Luscombe Phantom aircraft.

Congratulations to Mike and Norma Lella on their wedding, Ken Orloff and Lynn Barber on their engagement, Alan Gaudenti and Uni on their engagement, and the upcoming wedding of Paul Purifoy and Kim Curran. We have a lot of happy occasions on the agenda for Pine Mountain Lake.

For September we have a fabulous speaker. We have, as our Guest Speaker, the second pilot to fly Space Ship One into outer space, Brian Binnie. What an honor. Make sure to be here for this one.

For the September 10<sup>th</sup> meeting, we are going to do the potluck a little different. Since it is PMLA Community Airport Day, and many of you will be already at the airport between 10:00-2:00pm, we are requesting that those of you whose last name begins in A-C bring a Hors-d'oeuvre, for those whose last name begins in D-H bring a salad, I-O a vegetable dish, P-S a potato dish and T-Z a dessert.

PMLAA will furnish ham, turkey and breads. The dinner will start at 6:00 pm Saturday September 10<sup>th</sup> at the Buchner Hangar. If you would like to switch what you bring, or if you know of many guests coming, please call me so we can have sufficient amount of food for everyone. PLEASE REMEMBER TO BRING ENOUGH FOOD FOR 8 PEOPLE. For those of you who cannot make anything we are asking for \$5.00 per person at the door.

Don't forget to get your PMLAA Shirts for Airport day. Call Conni at: 962-4325 to get one.

Conni

# **Tioga High School Needs Small Motors**

The Tioga High School Regional Occupational Program, which PMLAA supports, has asked for donations of several small single cylinder vertical "reel" type motors – like the kind that come on old lawn mowers. The students will learn how to dissemble, repair and reassemble the motors.

Clean out your garage and help students at the same time! If you can donate an old motor, or have any questions, please contact Paul Price: 962-7431.



# **Meet our PMLAA Members**

-- Catherine Santa Maria

### Luis and Claudia Alecio 962-5518

Luis and Claudia heard about PML thru friends and moved to PML in 2004. They saw the same film that the Hallocks saw featuring Clay Lacy and Pine Mountain Lake. At that time they were living in Camarillo, near Santa Barbara. They were very impressed that you could live in PML on the airport and have your very own taxiway in your backyard! They moved in two months later. They like to go to air shows. Luis is working on getting his pilot's license and wants to buy an aircraft probably with his friend Tim.

Luis is from Guatemala and Claudia is from El Salvador. Luis was playing music in church and Claudia was one of the singers. She joined the band and they went together for a year. They have been married for 11 years and Luis said they got married twice! They were married the first time on June 28, 1994 and then in the church on July 9, 1994. It must be wonderful to have two anniversary celebrations each year! The Alecios have two children: Maurice is 8 and Maggie is 4.



Luis is also a musician; he played in a band named DIRVUD. He played the bass guitar, and he still misses his band. Maybe he could start a new band in PML. He currently helps on the AV team for PMLAA meetings.

Luis met Tim Hallock when he was 18 years old and has worked with him in ever since. As you know, Tim and Cecilia Hallock live in PML as well and they own Aviation Design. Luis is the shop foreman.

Luis is taking golf lessons in his free time and Claudia is a full time Mom. They like the friendly people in the PMLAA and PML.

Etty Garber 962-5205 Ettyg1@cs.com

When Etty's brother found PML, he first bought a lot, then told Etty about PML and invited her to come up and see the area. So Etty brought her mother up to see her brother's lot, loved the area and then bought a lot with her mother on Big Foot Circle in 1970. Her parents moved into the house in 1978 and lived there until 1993. Etty's stepfather, Nate Giller ran the Marina for 10 years. After they passed away Etty sold the house and bought another home on Cresthaven Drive. She rented out the home until 2003. Etty retired on November 7, 2003 and moved into the home on November 15, 2003.

Etty has been a therapist for 25 years and before that she was a school teacher for 25 years. Etty worked for Health Net for 8 years and had her own Private Practice in Southern California. She lived in Harbor City, CA near Torrance. Etty is a licensed therapist and specializes in marriage and family counseling. She still works part-time by appointment only and works with children, families, individuals, couples and women's groups.



Etty has one son who lives in Santa Cruz and 2 grandsons. One of the grandsons goes to UC Davis and the other goes to Stanford. Both are very good Water Polo Players! In addition, she has a dog named Lucy

who was named after Lucille Ball because the dog has red

Etty became interested in the Aviation Club because her brother is an air traffic controller and he is the tower chief in Livermore. Etty is also a board member for Gains, a member of the PML Ladies Club, a member of Soroptimist and the "S" Club committee chair and a member of Curves.

Welcome Etty!

# Community Aviation Day and Next Meeting September 10

### **DIRECT FROM THE DIRECTOR**

# **Noise Sensitive Areas at PML**

-- Jim Thomas

everal pilots have asked whether it is legal to fly over Pine Mountain Lake (the body of water, not the subdivision). The simple answer is yes, it is legal to over-fly the lake. To the best of my knowledge, there are no government imposed flight restrictions anywhere in our area, except for the "Blanket NOTAM" that advises pilots to avoid the airspace above or in the proximity to power plants, dams, refineries, industrial complexes, military facilities, etc. In our case this applies to the Moccasin power plant and the New Melones Dam. That said, all local pilots should know that the Pine Mountain Lake subdivision is a "noise sensitive area" and over flight is discouraged.

For many years flights over the lake and golf course have been discouraged. Until last year, a sign at the end of Runway 27 stated, among other things, "No Left Departure Turns Over Lake." The sign was removed when the new run-up area was constructed. The sign has been reinstalled to remind pilots to avoid flying over the lake and that the CTAF is 122.9.

The Airports Department encourages all pilots to respect noise sensitive areas and to operate their aircraft in a manner that will reduce the impact of aircraft noise on residential areas. To educate local and visiting pilots, I have prepared recommended arrival and departure procedures for the Pine Mountain Lake Airport. These procedures are available to local pilots and I plan to have copies of these recommended noise-abatement procedures printed so they can be given to pilots and inserted into their airport guide book. Also, the procedures are posted on the PMLAA website.

For those not yet familiar with the recommended noise abatement procedures for Pine Mountain Lake Airport, a brief summary of the procedures is listed below:

- When departing Runway 27, climb to 4,000' prior to making any left turns.
- When arriving from the southeast, south, or southwest, avoid flying over the lake or golf course or make your arrival at or above 4,500' using a reduced power setting and reduced propeller rpm.
- When departing either Runway 9 or 27, please fly straight ahead until you are well past the end of the runway. There is an established 1000' long Runway Protection Zone (RPZ) past the end of each runway. Early turnouts over homes is unsafe and a violation of the FARs.

Although departing aircraft make the most noise due to their high power setting, high propeller speed and lower ground speed, arriving aircraft can also be a noise nuisance. Often arriving aircraft increase their propeller pitch in preparation for landing and a possible go-around. Anytime your engine speed approaches redline, you most likely are creating a significant amount of propeller noise. Pilots with constant speed propellers should avoid pushing in their prop control until established on the downwind leg.

# SAFETY CORNER

# **Stuff Happens!**

-- Linda Monahan, CFI

As I was pondering what to write about for this month's article, I got this email from one of my Private Pilot graduates. I couldn't have said it better myself! Read on ...

"So the question you've been asking yourself is, "How would one of my students perform with a real, no sh\_\_, honest to goodness in-flight emergency?" And the answer is: "by the book," because you have done a good job training them.

So I'm coming home today a bit NE of the Williams VOR at 6500 when I smell burning insulation. I said to myself, that it is *not* a good thing. A few seconds later the electrical system dropped out completely all at once, and I said to myself, that *really* isn't a good thing.

So, as trained, I first shut off the master switch, checked that the engine instruments were OK, hit the GPS for the nearest airport, trimmed for a 1000 fpm descent, and then grabbed the fire check list. I had already done the immediate stuff. I then switched the master back on and the smell got bad again so I turned it off. I headed toward the nearest airport which was Colusa and got out the handheld radio and declared an emergency on 121.5. I didn't hear anyone so as I got close to the ground I switched to the Colusa frequency and declared an emergency and a downwind landing because I wanted on the ground ASAP. There was enough battery left to get the flaps down. Still didn't hear anybody, landed downwind and fast but no worries mate.

So now I also know the answer to the question, "How will I perform with a real, honest to goodness in-flight emergency?" and the answer is not too bad. I didn't faint, didn't bend anything, and I don't think I sounded like a panicked boob on the radio. I had flight following so I called the FSS and reported what had happened. They asked lots of questions and said they'd pass it on in the system.

Turned out the guy who had been working on my plane last week had installed the wrong noise filter on the alternator. He installed one rated for a max of 10 amps and it melted the potting material, which then popped the case open and it drooled glop all down the firewall. There was no help available at Colusa but fortunately I had kept the old filter, which hadn't failed. I re-installed it, borrowed a battery charger from the only person around, and was good to go in a few hours.

So the bottom line is I'm not too unhappy with my performance myself. Less than 300 hours but I'm sure wracking up experience. "

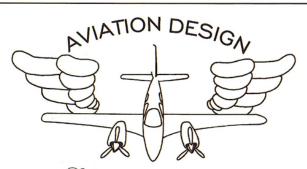
FLY SAFE,

# PMLAA POETRY

# ON THE NEVA -- by Mary Kelly

Shoreline green and golden,
Clouds of sun-blushed smoke
Rising against a changing sky,
Here on the River Neva.
Engines murmur, a rhythmic pulse,
Throbbing, purposeful, propelling,
Rushing burdens through placid paths...
The River Neva.

In this land of midnight light
The sun, ever present, gleams
As smoke plumes redden, shimmer,
Fade from morning's pale canvas.
Slate-gray swells give way
To our ship's curling wake,
Shore birds leave woodland margins
To dive for their daily harvest.
Alone, I embrace the Neva's peace.



Soars above the others...



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# PROPELLER NOISE

The biggest single factor in propeller noise is tip speed, that depends from the diameter of the propeller and its RPM. You can compute your tip speed at <a href="http://www.pponk.com/HTML%20PAGES/propellers.html">http://www.pponk.com/HTML%20PAGES/propellers.html</a>. If you want to use paper and pencil you can apply the following equation:

Prop Diameter X Pi / 12 X RPM X 60 / 5280 = Tip Speed in MPH Example: 86" prop turning at 2800 RPM 86 X 3.1416 / 12 X 2800 X 60 / 5280 = 716.4 MPH

The speed of sound is approximately 736 MPH (Mach1) at sea level, or more precisely:

Square Root (absolute temp + ambient temp) X 33.4 = Speed of Sound Example: 59 degree F. day Square root (460+59) X 33.4 = 760.9 MPH

The next thing you need to do is to compute the propeller tip Mach speed:

Tip Speed / Speed of Sound = Tip Mach Speed Example 716.4 / 760.9 = .942 MACH (to fast)

As the tip speed of your propeller approaches the transonic range, the noise level outside the aircraft takes a tremendous jump. The transonic range begins about 625 MPH, or Mach .85, and continues until the speed of sound or Mach1.

The next table put it all together and shows the tip speed of your prop as a function of the Propeller Diameter and RPMs and it indicates the combinations that produce more noise.

Propeller	RPMs								
Length	2400	2450	2500	2550	2600	2650	2700	2750	2800
74	528	539	550	561	572	583	594	605	616
75	535	547	558	569	580	591	602	614	625
76	543	554	565	577	588	599	610	622	633
77	550	561	573	584	596	607	619	630	641
78	557	569	580	592	603	615	627	638	650
79	664	576	588	599	611	623	635	646	658
80	571	583	595	607	619	631	643	654	666
81	578	590	602	614	627	639	651	663	675
82	585	598	610	622	634	646	659	671	683
83	593	605	617	630	642	654	667	678	691
84	600	612	625	637	650	662	675	687	700
85	607	620	632	645	657	670	683	696	708
86	614	627	640	652	665	678	691	704	710
87	621	634	647	660	673	686	699	712	726
88	628	641	654	668	681	694	707	720	733
89	635	649	662	675	688	702	715	728	741

Noisy Loud

Look closely at the chart to understand how important a 100 RPM reduction can be. A reduction of 100 RPM will usually reduce the excessive noise factor, and a reduction of 200 RPM is even better. On takeoff plan on reducing RPM as soon as you feel it is safe and the fellow neighbors will thank you.

### WWW.PMLAA.ORG

# News from the web

-- Silvano Gai, webmaster

# The last flight of the Raven at PML

On August 13<sup>th</sup>, Wayne Handley was a guest of PML with his famous Raven. Wayne delighted a small crowd of friends with the last low pass of the Raven over our runway.



On August 20th, while Tony and I were in PML printing this newsletter 3, Wayne performed the last aerobatic show with the Raven at the Evergreen Aviation Museum, in McMinnville, OR, home of the Spruce Goose. The Raven will become part of the permanent aircraft exhibition at the Museum as a testimonial of an awesome plane flown by one of the greatest aerobatic pilots: Wayne Handley. God always speed you, Wayne!

# **FSS Transition On Schedule**

The transition from public to private operation of the flight service station system continues with high hopes for better service. AOPA President Phil Boyer said the program is on track to have Lockheed Martin take over the system as scheduled on Oct. 4. Lockheed Martin got the \$1.9 billion contract in February and appeals by several other contenders have been rejected. Despite the controversy and doom-saying that has gone on, Boyer maintains the deal is a good one. "... We are convinced that this is the right thing at the right time for the benefit of GA pilots," he said. The contract includes performance guarantees that will ensure that phone calls to briefers will be answered within 20 seconds and radio calls within five seconds. Briefers will have system-wide access to weather and NOTAMs and pilots are guaranteed they'll get a briefer who knows local weather patterns and operations.



AOPA is also warning there may be the usual start-up glitches during the transition and is asking that pilots report any problems to AOPA so they can be reported to the FAA and fixed.

# Aerial Photos of PML

The Sept. 10th meeting will be the last chance to view and order any of the three aerial photos of PML Airport taken by photographer John Hockenbury in 1984 and 2005. Prices vary depending on our total order. John will be a guest of the Jobes at the Sept. 10th meeting and samples of all will be available for inspection. If you cannot attend the Sept. meeting or wish to inspect the photos before the meeting, they are available in the Jobes' "Hangar House" - call 962-5508.

# Classifieds

- American Aviators' VIP Tour of China: See the amazing old and incredible new China accompanied by Flying Tigers from World War II on our third annual aviator tour of China, personally escorted by Larry and Nina Jobe only \$2329 per person for 17 days. Details at <a href="https://www.TravelAireTours.com">www.TravelAireTours.com</a> or (209) 962-5588 or toll-free at (866) 669-2288.
- Heli-Chair: an innovative way to learn how to fly a
  helicopter, is guaranteed to transfer skills necessary to fly a
  real helicopter (http://www.learntohover.com). This is not a
  computer simulation, it is a real helicopter emulator utilizing
  a remote controlled helicopter. Purchase your own HeliChair system or take advantage of training at E45 is \$50 per
  hour. Call Kas at 209.962.1843. sales@heli-chair.com
- For Sale: Two British AeroSpace/Scottish Bull Dog Aircraft. They are newly imported from the Jordanian Air Force where they were used for all aspects of training. Both have less than 4900 TT, with 500 SMOH on their 200 hp Lycoming engines that were serviced and overhauled by Mattituk. They're fully Aerobatic (+6g/-3g) with Christen aerobatic fuel and oil systems, full IFR with Narco/King radios/audio panels, they seat up to four, have control sticks and tricycle gear so anyone can fly them! Price is \$55,000 delivered, \$60,000 assembled. For more info on them, call Steve Stavrakakis at 209-571-9949 or e-mail at wildthingss@aol.com
- Van's RV-10: Completed to your specs. Mike Shaver (209) 962-6885 or mike@goldrush.com

# **PMLAA Fly-Out**

PMLAA is organizing a fly-out to Solvang on September 18! Come join us.

We'll fly from PML to the airport at Santa Ynez. We'll take a pre-arranged van into town where you can have lunch and spend the day shopping or sightseeing. Solvang, meaning sunny fields, was founded in 1911 by a small group of Danish educators wanting to establish a Danish-type folk school in an area where settlers could farm the rich soil. The town grew up near the Santa Ines Mission, founded in 1804. The town was built on land that was originally a Spanish Land Grant.

The area is a charming blend of Spanish, Mexican, Chumash Indian and Danish cultures.

Stay overnight if you like, or fly home in the afternoon.

For more information or to sign up, call Mick Hopson at 962-6290.

# **Community Aviation Day**

September 10

**PML Airport** 

10:00am - 2:00pm

# **PML Community Airport Day**

In conjunction with the Columbia EAA Chapter, PMLAA will host Community Airport Day on September 10. It's an opportunity to showcase our airport and aviation to our neighbors, and especially local students.

It's also a great day to enjoy our own airport and celebrate our interest in aviation. Come on out!

There's plenty of opportunity to be involved. We need:

- Airplanes to display
- Hot dog servers
- Spot landing contestants and judges
- Hosts to walk visitors around
- Pilots to give rides to kids

To get involved in this fun activity, please contact:

Rand - 0710

Dick - 6400

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NEWSLETTER									

Aviation Association meetings are normally held at 6:00pm on the first Saturday of every month at the Buchners' Hangar, 20885 Hemlock on the corner of Woodside Way.

962-6378

962-5181

962-7904

**Publisher** 

Safety Editor

Silvano Gai

Linda Monahan

Member Profiles Editor

Catherine Santa Maria



# Mark your Calendar

September 10 Community Aviation Day

Sponsored by PMLAA and Columbia EAA 10:00am – 2:00pm

Brian Binnie, SpaceShip One 6:00pm

**Buchner Hangar** 

Alphabetically assigned potluck

See page 2.

6:00pm

PML Airport

October TBD Regular Meeting

Pine Mountain Lake Aviation Association PO Box 131 Groveland, CA 95321

# Next meeting September 10