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Directions to the Museum
Approximately 35 miles east of Albuquerque on Interstate 40, take Exit 197 onto Old Highway 66 in Moriarty, NM. The museum is the big building on your left.

NOTES FROM THE BOARD

With the passing of George museum activities have taken on new and many varied directions. There is no doubt that George was the catalyst for ensuring the vision of a World Class museum dedicated to soaring and to this end those of us left behind are picking up the gauntlet and forging ahead. Projects begun by George are still ongoing (like the construction of a replica Wright Flyer and the paving of our parking lot, more about that later) while at the same time new initiatives are in the works. But before I go into detail, let’s talk about the Board.

George’s passing left a huge hole in the Museum Board as he was our President. The Board then elected me (Bob Hudson) to take over the Presidency. After I moved up we then added Mark Hawkins to the Board. Mark is a Northrop Grumman employee and a long time glider pilot, Libelle owner, and co-owns Hawk Tracking which is the web site that provides service to aggregate satellite tracking devices and consolidates them onto a single map. Then later in the summer, board member Kathy Taylor left the Board and moved over to the Museum Foundation. Kathy’s departure has left us without a newsletter editor as well as the missing board position. To solve the newsletter issue we were able to strong arm Billy Hill to reignite his journalistic bent. (Read his article on the Zuni posted in this newsletter.) Bottom line we are down one board member at the moment and are eagerly searching for a replacement.

Okay, back to museum activities. Since the last newsletter, the museum has picked up five new major additions. Of course the highlight of these donations was the acquisition of the Zuni. We also picked up a Grob 103, a KA-6, a Blanik L-13 and a HP-12A. These additions have necessitated a
complete redesign of our floor plan to make room for these gifts. Helping with the new floor plan is the fact that we have finally acquired engineering approval to hang some of the aircraft from the ceiling. This will go a long way to make room for our new acquisitions. Future issues of the newsletter will showcase these new assets.

Speaking of acquisitions, we have had several opportunities to receive other donations. The only issue we have with adding inventory is the fact that we do not have storage space and if the aircraft is in an open trailer then we run the risk of damage due to weather or vandalism as we have to store them outside of the facility.

As mentioned before, we need to pave our parking lot. Right now it is packed gravel and dirt and when it rains or snows it turns the lot into a quagmire. We are in the process of getting quotes to have the lot “paved” and then we will establish a donation fund to accomplish the task. If you wish to contribute in advance of our getting the quotes then send your donation to the post office box and designate “parking lot” and we will set it aside for this project.

Another project we are setting up for this spring is a cover/awning over the museum front door. This is needed because when the wind blows and it is raining the water falls right on you as you try to enter the building.

Next we are in the process of adding a natural gas heater to our restoration shop. Right now the shop is unheated and that makes it extremely uncomfortable to do any work in there. The heater has been purchased and we are just waiting to get a plumber to make the final connections.

Lastly, while George was alive he wanted no recognition for himself with respect to the Museum. Now that he has left us we are in the planning stage to put together an exhibit that would recognize the great accomplishments George has made to the soaring community. You will read more about this in the future.

So, as you can see things are “hopping” at your museum. If you haven’t been here in while it is definitely worth your time to come see the collection and wander through the gift shop. I ask for one favor and that is to give me a call (505-507-6332) when you do visit so that I can come and meet each and every one of you. It is not an inconvenience as I can usually be found at the nearby Moriarty Airport. Until the next time drop me a line if you have suggestions, comments or just need a pen pal.

Yours in Soaring, Bob Hudson

The USSSM Board of Directors is very pleased to introduce our newest member, Mark Hawkins. Mark’s background and energy is a valued addition to your museum board.

Mark Hawkins is a long time sailplane pilot and active member of the Albuquerque Soaring Club living in nearby Edgewood, New Mexico. He moved from the Hampton Roads, Virginia area where he was an active member of the Tidewater Soaring Society to the “Land of Enchantment” around 8 years ago to enjoy the stellar soaring conditions of New Mexico as well as the wonderful weather offered by the area. As a 1985 graduate of the US Naval Academy and former surface line naval officer, he has seen a lot of wonderful places around the world. However the sunrises and sunsets of New Mexico rank at the top of his list.

Mark was honored to be asked to join the board of the Southwest Soaring Museum. In addition to his background in soaring and aviation, he brings to the board over 30 years of skills and experience with computers and technology in general. He hopes to work closely with the other members of the board to help improve the museum where possible and to help carry on the legacy left by George Applebay to provide a place where people can learn about the past, present and future of the wonderful sport of soaring.
We are fortunate to now have on display one of George Applebay’s Zuni Gliders. In the photograph above it is shown at home right next to George’s Zia. This particular glider is serial number 26, manufactured in 1981.

The museum appreciates the generous donation of this glider by the Applebay Family

LIKE SWALLOWS TO CAPISTRANO
By W.G. Hill

A recounting of the gathering of Zuni sailplanes during the third week of May at Moriarty, NM would not be complete without an overview of the inception of this American design. Actually it will take a book to fully divulge the entire history of Project Zuni.

I met George Applebay for the first time at the 1976 SSA Convention which had been held in Denver Colorado. Both George and his business partner Dick Roberts were there attempting to generate interest in George’s design which, by virtue of his Indian heritage, was named the Zuni.

Although George said he was on course to build the best fifteen meter ship yet designed, he was very unpretentious, soft spoken and in fact was somewhat subdued in his demeanor. I discovered later on during the week that George had just lost his oldest son in a hang glider accident less than a month before. The death of George’s sixteen year old son Brent is relevant to this story as it was Brent, a straight A student and star athlete, who was responsible for the start of the Zuni project which had been suggested to Brent by George rather than the undertaking of the design of a hang-glider.

My first thought regarding Applebay was who in (expletive deleted), was this guy? I’d never heard of him nor did anyone else I spoke to. After a bit of research, I discovered George had designed the open class Mescalero as a test of his ability to thin and blend the Wortmann 67K-170 and 150 airfoils and yet retain their overall flight characteristics as well as design an American glider to compete in the SSA’s late ’70’s design competition. With the Zuni, George eventually succeeded in making the airfoil modifications which included a thicker section, (nineteen percent of cord), at the point where the wings joined the fuselage. It seemed that George had taken a page from the Boeing Airplane Building Manual and substantially increased the strength of the wing at that point much like the wing on...well, a Boeing.

The wing was then thinned exponentially to fifteen percent at station forty-two and by the wing tip, to thirteen percent. The Achilles heel of the Zuni was not the wing itself, but the wing pins which were initially designed to a load limit of ten Gee’s. On May twenty second, 1977, Dr. Tom Brandis had said pins fail at nine point seven Gee’s while flying the second proto-type Zuni at a speed which the NTSB later determined to be two hundred fourteen miles per hour, considerably above the design red-line of one hundred eighty miles per hour.

At that time Aero-Tek, the name of George’s firm, was incorporated as a state funded New Mexico company. The death of Dr. Brandis and a subsequent law suit by his estate led to the dissolution of Aero-Tek which George was later able to buy back for pennies on the dollar. Although this did not cause the death of the Zuni project, it certainly left it severely wounded.
The plan was for both Tom Brandis and me to compete in our Zunis during the ’77 Region Nine contest at the Estrella Glider Port. I arrived with the then remaining Zuni to race in the fifteen meter class which I won with speeds matching, (at least on some days), those of the winning open class ships, more specifically that of a Nimbus II flown by John Ryan. It was a sweet victory for “Project Zuni” and made both George and I very happy. In retrospect, I’m sure Tom would have bested me had he not died flying the other prototype.

The next challenge for the Zuni and I was the nationals at Hobbs. I had a somewhat ignominious start as the end of the first day found me forty-first out of sixty-four gliders. Karl Strideck, perennial nationals winner, was flying a clipped wing ASW-17 and making contest starts at blistering speeds which I’m sure approached two hundred MPH if not more.

I managed to win the seventh contest day at the fastest speed and the longest task set during that contest. By the second to last day, I had moved up to sixth place. At that point it was go-for-broke. Unfortunately I pushed a bit too hard and landed at the first turn point thus ending the contest seventeenth overall. Even though I had not fared as well as I had hoped, the soaring community was served notice that there was a new kid on the block, that kid being the American Zuni, which was causing heads to turn.

By Fall of that year the third Zuni had been built for George’s former business Dick Roberts. I used this ship to perform stability, stall and high speed tests. Additionally the number three ship was also used to test the modified all flying horizontal stabilator which was subsequently fitted on all future Zunis.

Because George had built the Zuni for racing, the original Zuni I’s had only 57 minutes, (just over ½ a degree), of dihedral. Additionally the ship came with a very tall landing gear which made for great ground clearance, but a very heavy tail weight. It also had a side mounted stick. The later Zuni II’s, (starting in 1980), came with a shorter gear leg, two degrees of dihedral, carbon fiber spar caps and control surfaces as well as a center console mounted control stick.

Dick Johnson tested one of the early Zuni I’s in 1979 and reported a best L/D 37.7 although some of the scatter in his test showed plots above that value. It should be noted that the above mentioned glide performance certainly flies, (pun intended), in the face of scores posted during regional, national and for that matter the ’83 Worlds in Hobbs. Admittedly the quality control used during the construction process may not have been as good as Applebay would have liked and therefore the ship tested by Johnson may not have been quite as good as some of the other ships.

1983 was the last year I competed in a National 15 Meter Contest in the Zuni and I managed a respectable 6th overall against such ships as the Ventus, the ASW-20, the LS-3 and others of their ilk. The contest was held at Ionia Michigan were the pundits said the heavier New Mexico design would not fair well in eastern conditions.

Actually I flew the first contest day of the ’84 15 Meter Contest held at Ephrata, WA. An unfortunate mid-air took me out of the competition and after my ship was repaired, I sold it and switched to the Standard Class.

In 1980, George hired Fidel Ramirez who spent many years under George’s tutelage learning first how to build Zunis and then when production stopped in 1983, how to repair fiberglass sailplanes.

Fidel, over the course of the last thirty-five years, has become wise in the ways of ‘fixin’ fiberglass. He is a more than a mechanic; he is a craftsman whose repairs are second to none. Not long ago I said to George that I felt the student, (Fidel), had exceeded the skills of the master who of course is Applebay. George readily agreed.

During the ensuing years George has repaired and performed annual inspections on his design. He has also gathered up the remains of those Zunis too damaged to repair and has kept them as a source of parts used to maintain the remaining fleet.

Although the serial numbers of the Zunis made would lead you to think otherwise, there were only a total of twenty Zunis built. Serial number 30 was sold partially completed to Mike Smith of Johnson City, Kansas.

Steve Leonard, who has helped me with a good deal of the historical information for this article has been faithfully racing his Zuni for a number of years now.

Bob Whelan has been plying the skies of Colorado in serial number three which, with almost 2100 hours of flying is the high time Zuni.

New comer Randy Acree, who has been racking up the OLC miles, has been racing around the Arizona country side showing that a well flown Zuni can still give an excellent accounting of it’s self and has caused some of the locals to do a double take when they see the “thirty something” design hanging with them in sustained glides.

Unfortunately, serial numbers 1, 12, 14 and 19 have been destroyed. Serial numbers 3,4,5,24,26 and 28 were present at the Zuni Pow Wow.

When you look at the photos of George standing by a Zuni it’s all too clear that he is very proud of his creation and is looking forward to seeing his design; like the swallows to Capistrano, return on a yearly basis.
Other Museum News and Improvements

The façade of the Museum has long been considered rather drab. Thanks to the efforts of Gene Tieman and others there is now a pair of large, aluminum glider images displayed. The larger glider in the forefront is an Applebay Zuni. The smaller glider in the background is a Ventus 2-BX. We with to thank Tillery Chevrolet for the generous, free loan of their man-lift truck that made the installation possible.
Another new display at the museum is the Nelson Hummingbird. This wonderful old motor glider has been languishing in the museum hangar at the airport for many years. It has now been cleaned up and on display at the museum.

Introduced in 1953, the Hummingbird was an attempt to improve upon the marginal performance of the Dragonfly, of which only seven were produced. The resulting design is a mid-wing glider built predominately from wood, with the wing leading edge filled with styrofoam and doped aircraft fabric used on the aft portion of the wing, the tail and the rudder. After the first two were completed the remainder were built from metal in place of wood.
USSSM Membership Application

Benefits of memberships include:
1. Free admission to museum facilities.
2. 10% discount on gift shop purchases.
3. Receive all USSSM mailings.
4. The satisfaction of knowing that you are helping to build a first-class museum.

Life members and major contributors and their minor children receive these benefits for life. Other members receive them for one year. Family, Supporting and Sustaining include minor children. Supporting and Sustaining accrue toward a Life membership.

Send check to: U.S. Southwest Soaring Museum
P.O. Box 3626
Moriarty, NM 87035

New _______ Renewal _______

Individual ______ $35  Family ______ $45  Student ______ $20  Supporting ______ $100  Sustaining ______ $500
Life Member ______ $1,000  Major Contributor ______ $5000

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