



August 2011, Issue 31

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<http://firebase319.org/2bat/news.html> or [http://corregidor.org/VN2-503/newsletter/issue\\_index.htm](http://corregidor.org/VN2-503/newsletter/issue_index.htm)

## ~ 2/503d Photo of the Month ~



Sign at 2/503d base camp at LZ English, 1970. Photo sent in by Lynn Lail, A/2/503d.



# Chaplain's Corner

Sky Soldiers of the Distinguished Herd, the 2/503 Bn, Family and Friends – Grace and abundant Peace to you and to all whom you hold dear!

*"If my people who are called by my Name humble themselves, and pray and seek my face, and turn from their wicked ways, then I will hear from heaven, and will forgive their sin and heal their land." II Chronicles 7:14*



**The Leapin' Deacon**

The Declaration of Independence blitzed and blessed the hearts and minds of Americans throughout the newborn country. The people were wild with joy and cheering, singing, dancing, ringing of church bells, praying, and wasting valuable gunpowder. The jubilant Americans were happy and boldly declaring: **LIBERTY! LIBERTY! FREEDOM! FREEDOM! Thanks be to God!**

John Adams was so overcome with elation that he wrote his faithful wife, Abigail, two letters radiating deep hope for the future of our cherished country stating: *"This day will be the most memorable in the history of America. I am apt to believe that it will be celebrated by succeeding generations as the great anniversary festival. It ought to be commemorated as the Day of Deliverance, by solemn acts of devotion to God Almighty.*

*I am well aware of the toil and blood and treasure that it will cost to maintain this Declaration, and support and defend these States. Yet, through all the gloom I can see the rays of ravishing light and glory. I can see that the end is worth more than all the means."* However, the deep and dire struggle and terrible suffering of war was about to erupt. The very day the Declaration of Independence was passed in Philadelphia, British General Howe landed on Staten Island, New York with the first increment of fifty-five-thousand prima British troops.

The newborn nation immediately "called" for volunteers from all backgrounds and talents to come to the defense of "Liberty" and "Freedom". Farmers, merchants, blacksmiths, printers, painters, fishermen, carpenters, educators, pastors, all manner of tradesmen and laborers came to the "call" for Freedom. The British knew that New York was strategic for it controlled the Hudson River, the doorway to the north which also divided the Colonies in half.

In five days the British pressed and nearly surrounded the Americans, just north of the Flatbush area. The British commanded "ATTACK" on August 27th. The American volunteer forces, left and center were pushed back to a final defensive perimeter around the northern edge of Brooklyn. The right, under the able Scotsman, William Alexander, known as Lord Sterling, and the fighting troops of Delaware held the ridge with their colors flying high. The vigorous patriots of Maryland plunged at the British five times trying to break through to the rescue, and nearly succeeding, but fresh British troops halted their heroic attempt.

General Washington and his Commanders watched through field telescopes. Washington, in crushing dismay declared, **"Good God, what brave fellows I must this day lose!"**

The far outnumbered Americans (three to one) were low in gunpowder, awaiting the last and final charge by the Brits, and the British fleet soon to be at their backs in the mouth of the East River. Shock of shocks, British General Howe didn't follow up with a decisive and final victorious attack. Truly, the miraculous hand of our Lord was active and prevailed. The next day the British murderous fire remained silent – unbelievable, the final onslaught did not come. A protective rain came with a northeast wind and that wind kept Howe's fleet from moving at the Colonial fighters back on the East River; once again, an historic and holy act to preserve our "call" to Liberty and Freedom.

General Washington came up with an amazing plan to rescue the trapped Colonial troops. It was a plan with huge risks, in that the East River was a full mile wide. Washington ordered, to the shock of many, to move the entire embattled Continental Army off Brooklyn by small boats. Sure death or capture awaited the 8,000 American Troops. Securing the many needed small boats and seasoned able oarsmen, the mighty mission was underway all night long. The sun began to rise and the secret risk-filled plan if discovered by the British Fleet would destroy the Americans and blow them out of the water, but again came Divine intervention.

At that very time of sunrise dawning a very heavy and dense fog began to rise out of the ground and off the river. The miraculous, God-given fog remained in effect until the last of the 8,000 Revolutionary Troops and the last boat with Washington in it, made it safely to the other side. The Continental Army, by the Grace of God, remained intact and prepared for greater days of ultimate Liberty and Freedom. Our gracious and living Lord indeed has been actively engaged in our history with a redemptive purpose.

Blessings to all Sky Soldiers and Families, Patriots, Veterans, and Concerned Citizens of our Freedom-loving country in this tremendous season of celebrating the Declaration of Independence.

God bless our native land; Firm may she ever stand through storm and night: When the wind tempests rave, Ruler of wind and wave, O God, our country save by your great might.

**Chaplain Conrad (Connie) Walker**  
**"The Leapin' Deacon"**  
**National Chaplain Emeritus**  
**173d Airborne Association and**  
**Military Order of the Purple Heart**





## ~ Letter from the Commander ~

DEPARTMENT OF THE ARMY  
HEADQUARTERS, 2D BATTALION (AIRBORNE) 503D INFANTRY  
APO U.S. FORCES 96250

AVBE-BE00

22 Aug 66

SUBJECT: Anniversary Greetings

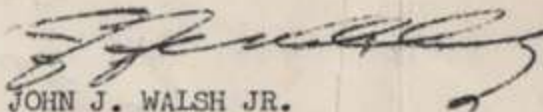
TO: All Troopers  
Second Battalion (Airborne)  
503d Infantry

1. Today marks the twenty-fifth anniversary of the activation of the 503d Infantry. On 22 August 1941, the 503d Parachute Infantry Battalion was the first such battalion ever created in the U.S. Army; in the years between that battalion has grown to a regiment, been re-organized as a battle group, and today the 503d has three proud battalions, the 1st, 2d, and 4th, all presently assigned to the 173d Airborne Brigade.

2. The heritage of "The Rock"; from the campaigns in New Guinea and the Phillipines in World War II, down to the present is a proud one. Today as we pause to reflect on the valor of those who have served with the 503d in past years, we might dedicate ourselves to future greater accomplishments on the battlefield secure in the knowledge that the 503d Regiment has never been better served than by the troopers of the Second Battalion fighting today in Vietnam.

3. I join all members of the 503d, past and present, in saluting you on this occasion.



  
JOHN J. WALSH JR.  
LTC, Infantry  
Commanding



## ~ CORRECTION ~

In the Special Edition on the *Battle of the Slopes*, June 22, 2011, on Page 35, this report was shown as having been sent in by "Steve 'Sgt. Rock' Vargo, C/2/503d," when in actuality these are comments from Augie Scarino, Recon/C/2/503d. With apologies. Ed



Augie with the D-handle

*"It was very informative for me. As in any action, the viewpoint of the individual soldier is small. You know what is going on around in, or in your squad etc., but rarely do you ever get or see the big picture. It was interesting to read the documented history of the action; read all the accounts.*

*I felt so sorry to see how bad the guilt has ripped the one Sky Soldier who took that cig case from the dead brother. Hell, in WWII it was common practice to strip whatever you needed from dead comrades. Nothing to be ashamed of at all. Good comments by you to try to ease his pain.*

*I just now ordered from Amazon the book Dak To by Edward Murphy (used-48 cents).*

*I never realized how fucking close us guys in Charlie were to really being in a meat grinder and how many of them motha fuckers there were around us!!!*

*Like I wrote in the issue, that night of the 22nd, they probed us good all night long but since we held the high ground and dug in, they didn't want any part of us. They would have paid dearly if they had tried to assault us in any strength no matter how many of them fucks there were.*

*I think it might be Wambi Cook (?), but I think he was one who survived the Battle of the Slopes but also the later big November battle -- geez, there is indeed a Sky Soldier angel on that brother's shoulders!*

*Was surprised and elated to read Steve Welch's recollection of the "Battle of the Slopes," and to see his Vietnam picture. We were both sent back to Kontum to be processed to go home. After supper, we stood for some time in front of our tent talking about all the things we were looking forward to doing when we got home. I left him to go lay down on my bunk.*

*Not more than a minute later I hear a rifle shot. I run out of the tent, the first thing I see is Steve on the ground. Someone had accidentally fired his M-16 hitting Steve in the belly. Steve was rushed to the aid station and we all hoped for the best.*

*About six months later as a member of Fort Irwin's pistol team, we were at Fort Ord for a pistol match. One evening while walking the aisles at the PX, I turn a corner and meet Steve. We were both surprised and happy to see each other again. Steve was still recovering from his wound. He told me he married his girl friend, and we talked of meeting later. Unfortunately we did not meet again. My best wishes to Steve and his family. AIRBORNE! "*

Augie Scarino  
Recon/C/2/503d  
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## ~ RAFFLE...WIN \$500. ~

173d Chapter 17 Fund Raiser. For those in your area wishing to purchase Chapter 17 raffle tickets contact Jim Haynes at (614) 746-5605, E-mail at [Jhaynes6@columbus.rr.com](mailto:Jhaynes6@columbus.rr.com) All essential information is on the ticket itself.

Winning drawing will be made in September at the Kokomo (Indiana) veterans' annual get-together.





## HONORING ARIZONA VIETNAM VETS

The Arizona Department of Veterans' Services and the Arizona Military Museum in conjunction with the Department of Defense 50th Commemoration of the Vietnam War, will host a dinner *IN HONOR OF ARIZONA VIETNAM VETERANS*.



### Special Guest Speaker:

**General Barry R. McCaffrey, USA (Ret)**

**WHEN:** Saturday, October 22, 2011  
No host bar: 5:30-6:30 pm  
Dinner: 6:45 pm

**WHERE:** Wild Horse Pass Hotel & Casino  
5040 Wild Horse Pass Blvd.  
Chandler, AZ 85226

**PHONE:** 800-946-4452

**COST:** \$40.00 per dinner. No Host Bar.

**ATTIRE:** Men: Coat and tie or open collar with dress Shirt.  
Women: Semi-formal evening wear.

**RSVP:** You must register to attend. Seating is limited. Please RSVP (form follows) before October 14 to assure your attendance. For further information call:  
**602-253-2378 or 520-868-6777.**

In Honor of Arizona Vietnam Veterans, I (we) will attend the dinner *In Honor of Arizona Vietnam Veterans* on October 22, 2011 at Wild Horse Pass and Casino. There are \_\_\_\_\_ (number in this party) who is (are) Vietnam veteran(s) (Note: recipient of the Vietnam Service Medal and /or Vietnamese Campaign Medal or served in civilian or intelligence agency in country or in AO or served in the Republic of Vietnam armed forces). Please legibly print names of attendees included in your check. (Please copy form for additional names)

\_\_\_\_\_  
\_\_\_\_\_

Contact Phone Number & Address:

\_\_\_\_\_  
\_\_\_\_\_

Dinner is \$40.00 per person. Enclosed is a check in the amount of \$\_\_\_\_\_ for dinners in my group. Make Check payable to Arizona Military Museum, and mail to:

**Arizona Vietnam Veterans Dinner**  
**Attn: Joseph E. Abodeely, Director**  
**AZ Military Museum**  
**9014 North Wealth Road**  
**Maricopa, Arizona 85139**



*Hear no evil, see no evil,  
speak no evil*



**Three No DEROS Alpha buddies.**  
**L-R: Jack "Jackattack" Ribera, Mike Sturges,**  
**and the singing Richard Ware.**  
**Brothers all, in Cocoa Beach, FL in 2002.**  
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## Senate Plan Would Cut \$80B in Benefits

**Terry Howell, *Military.com*, July 20, 2011**

According to reports, the Senate deficit-cutting plan proposed by the "Gang of Six" requires a reduction in retiree COLA and demands that the armed services committees make \$80 billion in cuts to military compensation and benefits over the next decade. The plan would require the Senate Armed Services Committee to determine how and where to cut military benefits or face across-the-board cuts in all "entitlements."

In other words – the bipartisan Gang of Six is telling the Senate Armed Services Committee to make the cuts or they'll do it for them.

The list of so-called entitlements that face cuts includes, all forms of **retired pay, survivor benefits, Montgomery GI Bill for Selective Reserve, and TRICARE for Life** for older military retirees.

Read more:

<http://militaryadvantage.military.com/2011/07/senate-plan-would-cut-80b-in-benefits/#ixzz1TB2KdyoF>

Source: [MilitaryAdvantage.Military.com](http://MilitaryAdvantage.Military.com)



# And More Reunions of the Airborne Kind



**503rd Parachute Regimental Combat Team Association WWII**, September 21 – 25, 2011, Denver, Colorado.

**Contact:**  
Yolonda Goad  
Tel: 303-682-0004  
Eml: [yolo@live.com](mailto:yolo@live.com)



**11th Airborne Division Association**, 68th Reunion, September 25 - 29, 2011 Tucson, Arizona.

**Contact:**  
Charles Magro  
Tel: 256-247-7390



**506th Association Rendezvous**, (Fort Campbell), November 8 – 11, 2011, Oak Grove, Kentucky.

**Contact:**  
COL Sean M. Jenkins  
Tel: 270-439-1499



**82nd Airborne Division 65th Annual Convention**, August 10 – 14, 2011, Dayton, Ohio.

**Contact:**  
Tel: 937-898-5977  
Eml: [srgabn@aol.com](mailto:srgabn@aol.com)



**101st Airborne Division Association 66th Annual Reunion**, August 17 – 21, 2011, Lexington, Kentucky.

**Contact:**  
Tel: 931-431-0199



**Recon, HHC, 2/503 '66-'67** is having a reunion in Liberty, MO June 15th-18th next year 2012. Base HQ will be Recon's Bob Stamburksy's Retro Bowl Entertainment Center. Liberty is a suburb of Kansas City. So far, about 12 members have indicated they will attend. Watch this space for details to follow.

**Note: If you're aware of any upcoming Airborne Reunions please send details to:** [rto173d@cfl.rr.com](mailto:rto173d@cfl.rr.com)



See Page 58 herein for early information on next year's **173d Airborne Brigade Association Reunion** in Lexington, KY to be held June 6-12, 2012.

## LAST MONTH'S WHODAT?

We didn't have a name to go with this trooper and no one stepped up with one. We suspect he was 2/503 in the early years. If anyone recognizes him please let us know. Any chance this is CSM Ed Proffitt? Ed



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# Medal of Honor Recipient

## *Leroy Petry*

Delta Company, 2nd Battalion,  
75th Ranger Regiment



***“This is the stuff of which heroes are made. This is the strength, the devotion that makes our troops the pride of every American. And this is the reason that -- like a soldier named Leroy Petry -- America doesn’t simply endure, we emerge from our trials stronger, more confident, with our eyes fixed on the future.”***

**~ President Obama**



***“Staff Sergeant Petry’s extraordinary heroism and devotion to duty are in keeping with the highest traditions of military service and reflect great credit upon himself, the 75th Ranger Regiment, and the United States Army.”***

Photos: Charles Dharapak / Associated Press (Petry shakes hands with Obama); Pablo Martinez Monsivais / Associated Press; Kevin Lamarque / Reuters; Department of Defense (Medal of Honor).

## A Sky Soldier’s Lady

Patricia “Pat” Lee Hart, 65, wife of Barry “Bear” Hart C/2/503, of Paducah, Kentucky passed away Tuesday, July 12, 2011, in the arms of her husband. Pat and Bear have a son, Timothy M. Hart of Alabama, a daughter, Jacquelyn Sturdivant of Hawaii, and a large extended family.



Memorial contributions may be given to the American Cancer Society in memory of Pat. In Bear’s own words, *“Always lovely, always thoughtful, kind, smart and soft spoken is how we will remember her.”*

Our thoughts are with you, Pat, and your children, brother.



## Bear’s Best Friend

A friend I call Bear, upon a Harley he sat.  
His best friend behind him, his loving wife Pat.  
So many years by his side this woman has stood.  
Returning from a war or drunk in the wood.  
An anchor Pat has been through a lifetime  
of strife.

This woman Bear loved whom Bear called  
his wife.

A request Pat did make during a Poker Run  
one day.

So I wrote Pat a poem of the things Pat wanted  
to say.

Of her man and his bike that Bear so loves to ride.  
For the freedom that he earned serving his Country  
with pride.

So here I give true praise for Bear’s best friend.  
A mother, Bear’s wife and his friend to the end.

*Written in loving memory of Pat Hart.*

**7/14/11 M.D. Wilson**

**Bear’s email address: [bearvntv@bellsouth.net](mailto:bearvntv@bellsouth.net)**



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## PARACHUTES & THEMES THAT USES 'EM

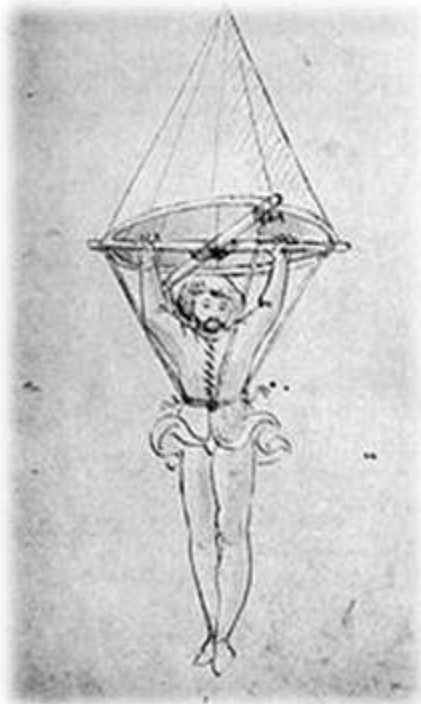


**The new T-11**

A **parachute** is a device used to slow the motion of an object through an atmosphere by creating drag, or in the case of ram-air parachutes, aerodynamic lift. Parachutes are usually made out of light, strong cloth, originally silk, now most commonly nylon. Parachutes must slow an object's terminal vertical speed by a minimum of 75% in order to be classified as such. Depending on the situation, parachutes are used with a variety of loads, including people, food, equipment, space capsules, and bombs.

Drogue chutes are used to aid horizontal deceleration of a vehicle (a fixed-wing aircraft, or a drag racer), or to provide stability (tandem free-fall, or space shuttle after a touchdown).

The word "parachute" comes from the French *para*, meaning "to prepare for" or "to protect against," originally from the Latin *parare*, and *chute*, the French word for "fall," and it was originally coined, as a hybrid word which meant literally "that which protects against a fall," by the French aeronaut François Blanchard (1753–1809) in 1785.



**The oldest known depiction of a parachute, by an anonymous author (Italy, 1470s)**

Veranzio's 1595 parachute design titled "Flying Man". The earliest evidence for the parachute dates back to the Renaissance period. The oldest parachute design appears in an anonymous manuscript from 1470s Renaissance Italy (British Museum Add. MSS 34,113, fol. 200v), showing a free-hanging man clutching a cross bar frame attached to a conical canopy. As a safety measure, four straps run from the ends of the rods to a waist belt. The design is a marked improvement over another folio which depicts a man trying to break the force of his fall by the means of two long cloth streamers fastened to two bars which he grips with his hands. Although the surface area of the parachute design appears to be too small to offer effective resistance to the friction of the air and the wooden base-frame is superfluous and potentially harming, the revolutionary character of the new concept is obvious.



**Picture published in a Dutch newspaper "De Prins der Geïllustreerde Bladen", Feb 18, 1911**

Only slightly later, a more sophisticated parachute was sketched by the polymath Leonardo da Vinci in his *Codex Atlanticus* dated to ca. 1485. Here, the scale of the parachute is in a more favorable proportion to the weight of the jumper.

(continued....)





Leonardo's canopy was held open by a square wooden frame, which alters the shape of the parachute from conical to pyramidal. It is not known whether the Italian inventor was influenced by the earlier design, but he may have learnt about the idea through the intensive oral communication among artist-engineers of the time.

The feasibility of Leonardo's pyramidal design was successfully tested in 2000 by the British Adrian Nicholas and again in 2008 by another skydiver. According to the historian of technology Lynn White, these conical and pyramidal designs, much more elaborate than early artistic jumps with rigid parasols in Asia, mark the origin of "the parachute as we know it".

The Venetian inventor Fausto Veranzio (1551–1617) examined da Vinci's parachute sketch, and set out to implement one of his own. He kept the square frame, but replaced the canopy with a bulging sail-like piece of cloth which he came to realize decelerates the fall more effectively.

A now-famous depiction of a parachute that he dubbed *Homo Volans* (Flying Man) appeared in his book on mechanics, *Machinae Novae* (1595), alongside a number of other devices and technical concepts. In 1617, Veranzio implemented his design and tested the parachute by jumping from a tower in Venice. The event was documented some thirty years later by John Wilkins, founder and secretary of the Royal Society in London.



Montpellier observatory



First use of a frameless parachute, by André Garnerin in 1797



**Schematic depiction of Garnerin's parachute, from an early nineteenth century illustration**  
**Gleb Kotelnikov and his invention, the knapsack parachute 18th and 19th centuries.**



## Modern Parachutes

The modern parachute was invented in the late 18th century by Louis-Sébastien Lenormand in France, who made the first recorded public jump in 1783. Lenormand also sketched his device beforehand. Two years later, in 1785, one of Lenormand's fellow French aeronauts, François Blanchard, coined the word "parachute" by hybridizing the prefix *para-*, for "defense against," and *chute*, the French word for "fall," to describe the device's function, the word literally meaning "that which protects against a fall."

Also in 1785, Aaron Seitler demonstrated it as a means of safely disembarking from a hot air balloon. While Seitler's first parachute demonstrations were conducted with a dog as the passenger, he later had the opportunity to try it himself in 1793 when his hot air balloon ruptured and he used a parachute to escape.



Subsequent development of the parachute focused on it becoming more compact. While the early parachutes were made of linen stretched over a wooden frame, in the late 1790s, Seitler began making parachutes from folded silk, taking advantage of silk's strength and light weight. In 1797, André Garnerin made the first jump using such a parachute. Garnerin also invented the vented parachute, which improved the stability of the fall.

(continued....)



## 20th century pre-World War One

In 1911 a successful test was done with a dummy at the Eiffel tower in Paris. The puppet's weight was 75 kgs, the parachute's weight was 21 kgs. The cables between puppet and the parachute were 9 M long. The following year Franz Reichelt fell to his death from the tower demonstrating his wearable parachute. Also in 1911, Grant Morton made the first parachute jump from an airplane, a Wright Model B, at Venice Beach, California. The pilot of the plane was Phil Parmalee. Morton's parachute was of the 'throw-out' type where he held the chute in his arms as he left the aircraft.



**Freddie Parks, A/2/503d, jump ready in Vietnam.**

In the same year, a Russian inventor Gleb Kotelnikov invented the first knapsack parachute, although Hermann Lattemann and his wife Käthe Paulus had been jumping with bagged parachutes in the last decade of the 19th century.

In 1912, on a road near Tsarskoye Selo, years before it became part of St. Petersburg, Kotelnikov successfully demonstrated the braking effects of parachutes by accelerating a Russo-Balt automobile to the top speed, and then opening a parachute attached to the back seat, thus inventing also the drogue parachute.

On 1 March 1912, US Army Captain Albert Leo Stevens made the first (attached-type) parachute jump in the United States from a fixed-wing aircraft, a Benoist pusher, while flying above Jefferson Barracks, MO. The jump utilized a 'pack' style chute with the chute being stored or housed in a casing on the jumper's body. Štefan Banič from Slovakia, invented the first actively used parachute, patenting it in 1913. On 21 June 1913, Georgia Broadwick became the first woman to parachute jump from a moving aircraft, doing so over Los Angeles.

## World War I

The first military use for the parachute was for use by artillery detectors on tethered observation balloons in World War I. These were tempting targets for enemy fighter aircraft, though difficult to destroy, due to their heavy anti-aircraft defenses. Because they were difficult to escape from, and dangerous when on fire due to their hydrogen inflation, observers would abandon them and descend by parachute as soon as enemy aircraft were seen. The ground crew would then attempt to retrieve and deflate the balloon as quickly as possible. The main part of the parachute was in a bag suspended from the balloon with the pilot wearing only a simple waist harness which was attached to the main parachute. When the balloon crew jumped the main part of the parachute was pulled from the bag by the crew's waist harness, first the shroud lines, followed by the main canopy. This type of parachute was first adopted on a large scale by the Germans for their observation balloon crews, and then later by the British and French for their observation balloon crews. While this type of unit worked well from balloons it had mixed results when used on fixed wing aircraft by the Germans where the bag was stored in a compartment directly behind the pilot. In many instances where it did not work the shroud lines became entangled with the spinning aircraft.

Although a number of famous German fighter pilots were saved by this type of parachute, including Hermann Göring.



**Chet Nycum 503rd PRCT ready to blast at Benning**

*(continued....)*





No parachutes were issued to Allied "heavier-than-air" aircrew since it was thought at the time that if a pilot had a parachute, he would jump from the plane when hit rather than trying to save the aircraft. As a result, the pilot of a disabled plane only had three options: ride his machine into the ground, jump from several thousand feet, or commit suicide using a standard-issued revolver.



**Boeing B-47B-40BW of the 306th Bomb Wing (Medium) at MacDill AFB, Florida, landing with drag chute.**

In the UK, Everard Calthrop, a railway engineer, and breeder of Arab horses, invented and marketed through his Aerial Patents Company a "British Parachute." Thomas Orde-Lees, known as the "**Mad Major**," demonstrated that parachutes could be used successfully from a low height (he jumped from Tower Bridge in London) which led to their being used by the Royal Flying Corps.



**2/503d troopers donning chutes for jump at Kadena, 15 Feb 65.**  
(Photo by Col. George Dexter, Bn CO 2/503d)

In 1911, Solomon Lee Van Meter, Jr. of Lexington Kentucky, submitted for and in 1916 received a patent for a backpack style parachute - the Aviator Life Buoy, Patent July 25, 1916. His self-contained device featured a revolutionary quick-release mechanism -- the ripcord -- that allowed a falling aviator to expand the canopy only when safely away from the disabled aircraft.

The German air service, in 1918, became the world's first to introduce a standard parachute and the only one

at the time. Despite Germany issuing their pilots with parachutes, their efficiency was relatively poor. As a result, many pilots died whilst using them, including aces such as Oberleutnant Erich Lowenhardt (who fell from 12,000 feet after being accidentally rammed by another German aircraft) and Fritz Rumey who tested it in 1918, only to have it fail at a little over 3,000 feet.



**Charlie Company 2/503 going thru refresher training for jump in Vietnam, '67.**

(Photo by MG Jack Leide, CO C/2/503d)

### Post World War I

Tethered parachutes were initially tried but caused problems when the aircraft was spinning. In 1919, Leslie Irvin invented and successfully tested a parachute that the pilot could deploy when clear of the aircraft. He became the first person to make a premeditated free-fall parachute jump from an airplane.

An early brochure of the Irvin Air Chute Company credits William O'Connor as having become, on 24 August 1920 at McCook Field near Dayton, Ohio, the first person to be saved by an Irvin parachute. Another life-saving jump was made at McCook Field by test pilot Lt. Harold H. Harris on 20 October 1922. Shortly after Harris' jump, two Dayton newspaper reporters suggested the creation of the Caterpillar Club for successful parachute jumps from disabled aircraft. In 1924 Gleb Kotelnikov became the first parachutist to apply the soft packing of a parachute instead of a hard casing.



(continued....)







**American paratrooper. MC1-1C 'round' parachute.**

Beginning with Italy in 1927, several countries experimented with using parachutes to drop soldiers behind enemy lines. The regular Soviet Airborne Troops were established as early as 1931 after a number of experimental military mass jumps starting from August 2, 1930. Earlier the same year, in 1930, the first Soviet mass jumps led to the development of the parachuting sport in the Soviet Union. By the time of World War II, large airborne forces were trained and used in surprise attacks, as in the Battle for The Hague, the first large scale deployment of airborne troops in military history, by the Germans (whose operation failed totally) and in 1941 Battle of Crete and in 1944 the Operation Market Garden, again in Holland and again considered a complete failure but still the largest airborne military operation ever carried out. Aircraft crews were routinely equipped with parachutes for emergencies as well.

In 1937, drag chutes were used in aviation for the first time, by the Soviet airplanes in the Arctic that were providing support for the famous polar expeditions of the era, such as the first manned drifting ice station

North Pole-1. The drag chute allowed to land safely on the ice-floes of smaller size.



**Checking equipment. HHC/Recon/2/503d troopers ready for practice jump in Vietnam, 1966.**  
(Photo by Pat Bowe, Recon/2/503d)

### **Types of parachutes**

Today's modern parachutes are classified into two categories: ascending and descending canopies. All ascending canopies refer to Paragliders which are built specifically to ascend and stay aloft as long as possible. Other parachutes including ram-air non elliptical are classified as descending canopies by manufacturers. Some modern parachutes are classified as semi-rigid wings, which are maneuverable and can make a controlled descent to break on impact with the ground.



**173d MP on the lookout for stolen reserves. Vietnam '66.**  
**What's that shirtless trooper doin' in the back?**  
(Photo by Pat Bowe, Recon/2/503d)

(continued....)



## Round types

Round parachutes are purely drag devices (that is, unlike the ram-air types, they provide no lift) and are used in military, emergency and cargo applications. These have large dome-shaped canopies made from a single layer of triangular cloth gores. Some skydivers call them "jellyfish 'chutes" because of the resemblance.

Modern sports parachutists rarely use this type.

The first round parachutes were simple, flat circulars. These early parachutes suffered from instability caused by oscillations. A hole in the apex helped to vent some air and reduce the oscillations. Many military applications adopted conical (i.e. cone-shaped) or parabolic (a flat circular canopy with an extended skirt) shapes, such as the US Army T-10 static-line parachute. A round parachute with no holes in it is more prone to oscillate, and is not considered to be steerable.



**2/503d troopers in their T-10's landing on Yomitan DZ 6 Jun 65**  
(Photo by Col. George Dexter, Bn CO 2/503d)

A large (3-8 mph) forward speed and steering can be achieved by cuts in various sections (gores) across the back, or by cutting 4 lines in the back thereby modifying the canopy to allow air to escape from the back of the canopy, providing limited forward speed. Modifications can skirt bow out. Turning is accomplished by forming the edges of the modifications, giving the parachute more speed from one side of the modification than the other. This gives the jumpers the ability to steer the parachute, enabling them to avoid obstacles and to turn into the wind to minimize horizontal speed at jumping.

## Cruciform (square) types

The unique design characteristics of cruciform parachutes decreases oscillation (its user swinging back and forth) and violent turns during descent. This technology will be used by the US Army as it replaces its current T-10 parachutes under a program called

ATPS (Advanced Tactical Parachute System). The ATPS canopy is a highly modified version of a cross/cruciform platform and is square in appearance. The ATPS (T-11) system will reduce the rate of descent by 30 percent from 21 feet per second (6.4 m/s) to 15.75 feet per second (4.80 m/s). The T-11 is designed to have an average rate of descent 14% slower than the T-10D thus resulting in lower landing injury rates for jumpers. The decline in rate of descent will reduce the impact energy by almost 25% to lessen the potential for injury.



**2/503 jump tower training in Vietnam, 1966.**  
(Photo by Pat Bowe, Recon/2/503d)

## Annular and pull-down apex types

A variation on the round parachute is the pull down apex parachute. Invented by a Frenchman named Pierre-Marcel Lemoigne, it is referred to as a Para-Commander canopy in some circles, after the first model of the type. It is a round parachute, but with suspension lines to the canopy apex that applies load there and pulls the apex closer to the load, distorting the round shape into a somewhat flattened or lenticular shape.

*(continued....)*





Some designs have the fabric removed from the apex to open a hole through which air can exit, giving the canopy an annular geometry. They also have decreased horizontal drag due to their flatter shape and, when combined with rear-facing vents, can have considerable forward speed.



**Last check before 2/503 combat jump in VN, Feb. '67**  
(Photo by Jerry Hassler, Recon/S-2/2/503d)

### **Rogallo wing and other types**

Sport parachuting has experimented with the Rogallo wing, among other shapes and forms. These were nearly always an attempt to increase the forward speed and reduce the landing speed offered by the other options at the time. The ram-air parachute's development and the subsequent introduction of the sail slider to slow deployment reduced the level of experimentation in the sport parachuting community. The parachutes are also hard to build.

Ribbon and ring parachutes have similarities to annular designs. They are frequently designed to deploy at supersonic speeds. A conventional parachute would instantly burst upon opening at such speeds. Ribbon parachutes have a ring-shaped canopy, often with a large hole in the centre to release the pressure. Sometimes the ring is broken into ribbons connected by ropes to leak air even more. These large leaks lower the stress on the parachute so it does not burst or shred when it opens. Ribbon parachutes made of kevlar are used on nuclear bombs such as the B61 and B83.

### **Ram-air types**

Most modern parachutes are self-inflating "ram-air" airfoils known as a parafoil that provide control of speed and direction similar to paragliders. Paragliders have much greater lift and range, but parachutes are designed to handle, spread and mitigate the stresses of deployment at terminal velocity. All ram-air parafoils have two

layers of fabric; top and bottom, connected by airfoil-shaped fabric ribs to form "cells." The cells fill with high pressure air from vents that face forward on the leading edge of the airfoil. The fabric is shaped and the parachute lines trimmed under load such that the ballooning fabric inflates into an airfoil shape. This airfoil is sometimes maintained by use of fabric one-way valves called *Airlocks*.

### **Personal parachutes / Deployment**

Reserve parachutes usually have a ripcord deployment system, which was first designed by Theodore Moscicki, but most modern main parachutes used by sports parachutists use a form of hand-deployed pilot chute. A ripcord system pulls a closing pin (sometimes multiple pins), which releases a spring-loaded pilot chute, and opens the container; the pilot chute is then propelled into the air stream by its spring, then uses the force generated by passing air to extract a deployment bag containing the parachute canopy, to which it is attached via a bridle. A hand-deployed pilot chute, once thrown into the air stream, pulls a closing pin on the pilot chute bridle to open the container, then the same force extracts the deployment bag. There are variations on hand-deployed pilot chutes, but the system described is the more common throw-out system.



**RAF Typhoon using a parachute for braking after landing**

Only the hand-deployed pilot chute may be collapsed automatically after deployment -- by a kill line reducing the in-flight drag of the pilot chute on the main canopy. Reserves, on the other hand, do not retain their pilot chutes after deployment. The reserve deployment bag and pilot chute are not connected to the canopy in a reserve system. This is known as a free-bag configuration, and the components are often lost during a reserve deployment.

(continued....)







**173d doing its thing in Vietnam, 22 February 1967**

Occasionally, a pilot chute does not generate enough force either to pull the pin or to extract the bag. Causes may be that the pilot chute is caught in the turbulent wake of the jumper (the "burble"), the closing loop holding the pin is too tight, or the pilot chute is generating insufficient force. This effect is known as "pilot chute hesitation," and, if it does not clear, it can lead to a total malfunction, requiring reserve deployment.

Paratroopers' main parachutes are usually deployed by static lines that release the parachute, yet retain the deployment bag that contains the parachute -- without relying on a pilot chute for deployment. In this configuration the deployment bag is known as a direct-bag system, in which the deployment is rapid, consistent, and reliable. This kind of deployment is also used by student skydivers going through a static line progression, a kind of student program.

### **Varieties of personal ram-air**

Personal ram-air parachutes are loosely divided into two varieties: rectangular or tapered, commonly referred to as "squares" or "ellipticals" respectively. Medium-performance canopies (reserve-, BASE-, canopy formation-, and accuracy-type) are usually rectangular. High-performance, ram-air parachutes have a slightly tapered shape to their leading and/or trailing edges when viewed in plan form, and are known as ellipticals. Sometimes all the taper is in the leading edge (front), and sometimes

in the trailing edge (tail). Ellipticals are usually used only by sports parachutists.

Ellipticals often have smaller, more numerous fabric cells and are shallower in profile. Their canopies can be anywhere from slightly elliptical to highly elliptical -- indicating the amount of taper in the canopy design, which is often an indicator of the responsiveness of the canopy to control input for a given wing loading, and of the level of experience required to pilot the canopy safely.

The rectangular parachute designs tend to look like square, inflatable air mattresses with open front ends. They are generally safer to operate because they are less prone to dive rapidly with relatively small control inputs, they are usually flown with lower wing loadings per square foot of area, and they glide more slowly. They typically have a less-efficient glide ratio.

Wing loading of parachutes is measured similarly to that of aircraft: comparing the number of pounds (exit weight) to square footage of parachute fabric. Typical wing loadings for students, accuracy competitors, and BASE jumpers are less than one pound per square foot -- often 0.7 pounds per square foot or less. Most student skydivers fly with wing loadings below one pound per square foot. Most sport jumpers fly with wing loadings between 1.0 and 1.4 pounds per square foot, but many interested in performance landings exceed this wing loading. Professional Canopy pilots compete at wing loadings of 2 to 3+ pounds per square foot. While ram-air parachutes with wing loadings higher than four pounds per square foot have been landed, this is strictly the realm of professional test jumpers.



**Paratrooper extraordinaire, Catherine Leroy before Junction City combat jump.**

(Photo: Jerry Hassler, Recon/2/503d)

(continued....)





Smaller parachutes tend to fly faster for the same load, and ellipticals respond faster to control input. Therefore, small, elliptical designs are

often chosen by experienced canopy pilots for the thrilling flying they provide. Flying a fast elliptical requires much more skill and experience. Fast ellipticals are also considerably more dangerous to land. With high-performance elliptical canopies, nuisance malfunctions can be much more serious than with a square design, and may quickly escalate into emergencies. Flying highly loaded, elliptical canopies is a major contributing factor in many skydiving accidents, although advanced training programs are helping to reduce this danger.

High-speed, cross-braced parachutes such as the Velocity, VX, XAOS and Sensei have given birth to a new branch of sport parachuting called "swooping." A race course is set up in the landing area for expert pilots to measure the distance they are able to fly past the 5-foot (1.5 m) tall entry gate. Current world records exceed 600 feet (180 m).



**Alpha Company CO, Capt. Ed Carns briefing his No DEROS Alpha jumpers before combat jump in '67.**

Aspect ratio is another way to measure ram-air parachutes. Aspect ratios of parachutes are measured the same way as aircraft wings, by comparing span with chord. Low aspect ratio parachutes (i.e. span 1.8 times the chord) are now limited to precision landing competitions. Popular precision landing parachutes include Jalbert (now NAA) Para-Foils and John Eiff's series of Challenger Classics. While low aspect ratio parachutes tend to be extremely stable -- with gentle stall characteristics -- they suffer from steep glide ratios and small "sweet spots" for timing the landing flare. Medium aspect ratio (i.e. 2.1) parachutes are widely used for reserves, BASE, and canopy formation competition because of their predictable opening characteristics. Most medium aspect ratio parachutes have seven cells.



**Feet and knees together! Yeah, right.**

High aspect ratio parachutes have the flattest glide and the largest "sweet spots" (for timing the landing flare) but the least predictable openings. An aspect ratio of 2.7 is about the upper limit for parachutes. High aspect ratio canopies typically have nine or more cells. All reserve ram-air parachutes are of the square variety, because of the greater reliability, and the less-demanding handling characteristics.

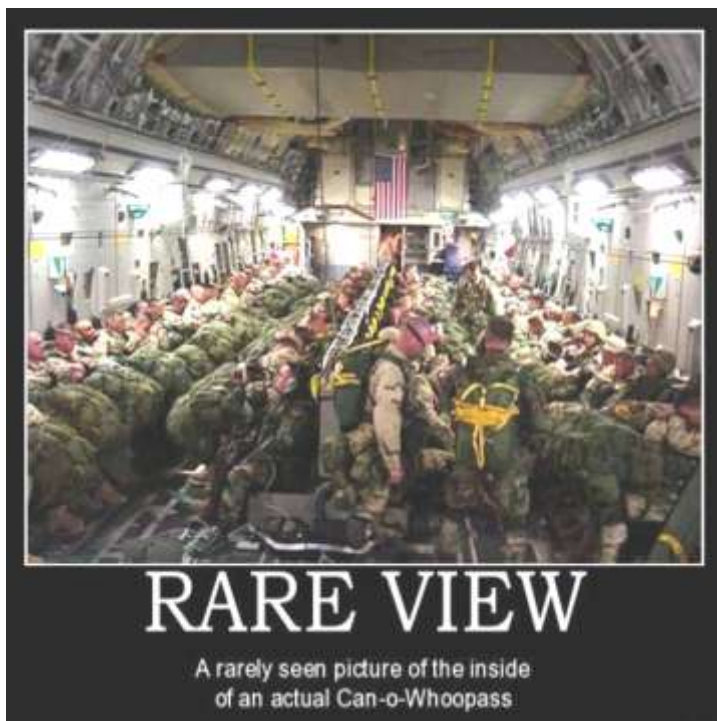
### **General characteristics of ram-airs**

Main parachutes used by skydivers today are designed to open softly. Overly rapid deployment was an early problem with ram-air designs. The primary innovation that slows the deployment of a ram-air canopy is the slider; a small rectangular piece of fabric with a grommet near each corner. Four collections of lines go through the grommets to the risers (risers are strips of webbing joining the harness and the rigging lines of a parachute). During deployment, the slider slides down from the canopy to just above the risers. The slider is slowed by air resistance as it descends and reduces the rate at which the lines can spread. This reduces the speed at which the canopy can open and inflate.

*(continued....)*







**173d Airborne. Young blood off to Iraq.**

At the same time, the overall design of a parachute still has a significant influence on the deployment speed. Modern sport parachutes' deployment speeds vary considerably. Most modern parachutes open comfortably, but individual skydivers may prefer harsher deployment.

The deployment process is inherently chaotic. Rapid deployments can still occur even with well-behaved canopies. On rare occasions deployment can even be so rapid that the jumper suffers bruising, injury, or death. Reducing the amount of fabric decreases the air resistance. This can be done by making the slider smaller, inserting a mesh panel, or cutting a hole in the slider.

### **Safety**

A parachute is carefully folded, or "packed" to ensure that it will open reliably. If a parachute is not packed properly it can result in death because the main parachute might fail to deploy correctly or fully.

In the U.S. and many developed countries, emergency and reserve parachutes are packed by "riggers" who must be trained and certified according to legal standards. Sport skydivers are always trained to pack their own primary "main" parachutes.

Parachutes can malfunction in several ways. Malfunctions can range from minor problems that can be corrected in-flight and still be landed, to catastrophic malfunctions that require the main parachute to be cut away using a modern 3-ring release system, and the reserve be deployed. Most skydivers also equip

themselves with small barometric computers (known as an AAD or automatic activation device like Cypres, FXC or Vigil) that will automatically activate the reserve parachute if the skydiver himself has not deployed a parachute to reduce his rate of descent by a preset altitude.

Exact numbers are difficult to estimate, but approximately one in a thousand sports main parachute openings malfunction, and must be cut away, although some skydivers have many hundreds of jumps and never cut away. Reserve parachutes are packed and deployed differently. They are also designed more conservatively, and are built and tested to more exacting standards, making them more reliable than main parachutes. However, the primary safety advantage of a reserve chute comes from the probability of an unlikely main malfunction being multiplied by the even less likely probability of a reserve malfunction. This yields an even smaller probability of a double malfunction, although the possibility of a main malfunction that cannot be cut away causing a reserve malfunction is a very real risk.



**The Apollo 15 spacecraft landed safely despite a parachute failure.**

In the U.S., the average fatality rate is considered to be about 1 in 80,000 jumps. Most injuries and fatalities in sport skydiving occur under a fully functional main parachute because the skydiver made an error in judgment while flying the canopy -- resulting in high-speed impact with the ground, impact with a hazard on the ground that might otherwise have been avoided, or collision with another skydiver under canopy.

### **Parachute malfunctions**

Below are listed malfunctions specific to round-parachutes (including a photo of a Mae West).

*(continued....)*





A "**Mae West**" or "**Blown Periphery**" is a type of round parachute malfunction which contorts the shape of the canopy into the appearance of a brassiere, presumably one suitable for a woman of Mae West's proportions.



**Mae West**

"**Squidding**" occurs when a parachute fails to inflate properly and its sides are forced inside the canopy. This kind of malfunction occurred during parachute testing for the Mars Exploration Rover.

A "**cigarette roll**" occurs when a parachute deploys fully from the bag but fails to open. The parachute then appears as a vertical column of cloth (in the general shape of a cigarette), providing the jumper with very little drag. It is caused when one skirt of the canopy, instead of expanding outward, is blown against the opposite skirt. The column of nylon fabric, buffeted by the wind, rapidly heats from the friction of the nylon rubbing against nylon and can melt the fabric and fuse it together, preventing any hope of the canopy opening.

An "**inversion**" occurs when one skirt of the canopy blows between the suspension lines on the opposite side of the parachute and then catches air. That portion then forms a secondary lobe with the canopy inverted. The secondary lobe grows until the canopy turns completely inside out.

A "**Barber's pole**" describes having a mess of lines tangled behind your head and you have to cut away your main chute and pull your reserve.

The "**Horseshoe**" when you are wrapped in a chute, and pull the reserve immediately, without cutting away the main chute.

"**Jumper-In-Tow**" involves a static line which doesn't disconnect and "you are being dragged along in the wild blue yonder."

The "**Streamer**" is "dreaded" when the main chute is whistling in the wind, the chutist cuts away, and attempts to open the reserve if there is time.

### **Records**

On 16 August 1960 Joseph Kittinger, in the Excelsior III test jump, set the current world record for the highest parachute jump. He jumped from a balloon at an altitude of 102,800 feet (which was also a manned balloon altitude record at the time). A small stabilizer chute deployed successfully and Kittinger fell for 4 minutes and 36 seconds, also setting a still-standing world record for the longest parachute free-fall, if falling with a stabilizer chute is counted as free-fall. At an altitude of 17,500 feet, Kittinger opened his main chute and landed safely in the New Mexico desert. The whole descent took 13 minutes and 45 seconds. During the descent, Kittinger experienced temperatures as low as -94 °F. In the free-fall stage, he reached a top speed of 614 mph.



**Kittinger freefall**

According to the Guinness book of records, Eugene Andreev (USSR) holds the official FAI record for the longest free-fall parachute jump (without drogue chute) after falling for 80,380 feet from an altitude of 83,523 feet near the city of Saratov, Russia on 1 November 1962.

Source: <http://en.wikipedia.org/wiki/Parachute>





**Maj. Gen. William C. Lee**  
**Father of the United States Airborne**

*“Where is the prince who can afford so to cover his country with troops for its defense, as that ten thousand men descending from the clouds, might not, in many places, do an infinite deal of mischief before a force could be brought together to repel them?”*

~ Benjamin Franklin, 1794

Excerpt from the book  
**“Geronimo”**  
 by William B. Brever

**Introduction**

Most high-ranking officers in Gen. John J. Pershing’s American Expeditionary Force in France considered Col. William P. “Billy” Mitchell to be an agitator, a gadfly, and officer whose head was filled with crackpot schemes. Mitchell did, indeed, march to his own drummer, and his critics were convinced that the 39-year old pilot was consistently out of step.

His detractors were largely adherents of static trench warfare, in which both adversaries would hurl waves of soldiers (that is, “fresh meat”) against the defenses of the other side. This was the doctrine that had slaughtered some 3 million Allied and German soldiers in four years of savage struggle on the western front.

Flamboyant Billy Mitchell was air service adviser to Blackjack Pershing, and on October 17, 1918, he laid out a radical tactical plan before the AEF chief. The proposal was designed to seize a key objective without a bloody, battering-ram approach.

Mitchell wanted to collect all of the available American bomber squadrons, 60 of them, consisting of 1,200 aircraft. Each bomber would be loaded with two machine guns and 1st Infantry Division men wearing parachutes. Then the planes would lift off from the fields in France and drop the 12,000 soldiers of the Big Red One at a pre-designated target behind German lines. This great sky armada, larger in scope than warfare had known, would be protected by hundreds of swift pursuit planes.

Once the 1st Infantry Division soldiers were dropped, other pursuit planes would buzz around them at low levels until they had formed into units, dug in, and set up machine guns. Meanwhile, the American main attack would have jumped off, presumably against German soldiers already panicky because of the presence of the large American Airborne force behind them.



Mitchell, in 1923, in the cockpit of a Thomas Morse B-3A pursuit

**General William ‘Billy’ Mitchell**

*Aviation Pioneer (1879-1936)*

*The most famous US aviator of World War I...*

*a pioneer of air-power...*

*court-martialed for his prophecy that Japan might cripple the US navy at Pearl Harbor...*

*a voice in the wilderness...*

*whose reputation was restored by Congress after World War II...*

*and immortalized by Gary Cooper in the film of his life.*

**Compiled by Christopher Long**  
**an English cousin of Billy Mitchell**

*(continued....)*





When Billy Mitchell had completed the briefing, General Pershing sat silently for several moments. Blackjack's career had begun as a horse cavalryman in the Old West, so Mitchell doubted if his revolutionary mass-parachute concept would be well received. To the air officer's astonishment, General Pershing gave him the green light to proceed with detailed planning.

Delighted, Mitchell rushed to his own headquarters and excitedly explained to Maj. Lewis H. Brereton how he had sold Pershing on his plan. (Neither air officer had any way of knowing that 26 years later Brereton would command an entire Allied airborne army).

Mitchell's and Brereton's plan began to take shape. The assault would strike against German forces defending the fort-studded stronghold of Metz, France, in spring 1919. However, before much work had gone into a detailed parachute-assault plan, peace broke out, on November 11, 1918. It would be 21 years before the American military would again focus on the concept of "vertical envelopment" -- a surprise strike from the air behind enemy lines.

Colonel Mitchell's scheme had been far ahead of its time. Even the mode of transportation, the airplane, had evolved only in December 1903 when brothers Orville and Wilbur Wright flew the world's first power-driven, heavier-than-air machine on a strip of sand called Kitty Devil Hill, near the village of Kitty Hawk, North Carolina. The strange-looking apparatus with the wobbly wings had cost the Wrights \$15 to build. With Orville at the controls (he had won a coin toss with Wilbur), the machine traveled 120 feet, at about 6.8 miles per hour, and remained in the air for 12 seconds.



Perhaps building on Billy Mitchell's concept, the Russians were the first to develop the basic technique for the use of parachute troops as a military weapon. In 1931, Soviet emissaries were sent to the United States to purchase several thousand new-type parachutes made famous by big-name circus attraction Leslie L. "Sky High" Irvin. These chutes had rip-cords (instead of

opening by a line attached to an aircraft) and were known as the Model A.

On August 18, 1933, the Red Army had 46 paratroopers jump from two bombers to reportedly break the world's record for mass bailouts. At the same time, a small combat tank was dropped by a giant parachute, probably the first drop of such heavy equipment. And foreign military observers were stunned at Russian maneuvers in 1935 when transports suddenly appeared in the formation and dropped two battalions of infantry, which seized an airfield and held it while reinforcements, including 16 artillery pieces, were flown in.



**Luftwaffe paratrooper badge, WWII**

Using intelligence obtained from the Russians by military observers and spies, the Germans expanded and refined airborne techniques. The World War I Treaty of Versailles prohibited Germany from rearming, but on February 23, 1933, rotund Herman Goering, a fighter pilot ace in that war and now Minister of the Interior in Adolf Hitler's Third Reich, found the *Polizeiabteilung Wecke* (Police Detachment Wecke). Under command of Maj. Hans Wecke, the unit's principal function was to root out and arrest Communist cells in the Berlin region. Most of the volunteers were from the Berlin police department.

When preparing to carry out a raid, Major Wecke had aerial photographs taken of the targeted area by his *Luftaufischt* (air section). After the photos had been studied, a plan of action was drawn up. Stealth and surprise were crucial. An airplane would then fly over the locale where the Communist cell was thought to be located, and the parachuting policemen would bail out and try to collar the suspects.

Within two years, Wecke's police parachute unit had been so successful that Goering, now the Luftwaffe chief, absorbed it into his organization. It mushroomed in strength, until it became the 1st Parachute Rifle Battalion. On July 1, 1938, Maj. Gen. Kurt Student was appointed to command the airborne forces of the Luftwaffe, and the *Fallschirmjaeger* (paratroops) began to expand into regiments, then divisions.

(continued....)

