

CANARDPUSHER

JULY 2000

RUTAN AIRCRAFT FACTORY

VOL 16, ISSUE 3, NO. 101

The last time the century turned man had not yet flown. 100 years later our very own Burt Rutan was honored by two of the best known names in aviation — Lindbergh and Skunk Works.

In May Burt received the 2000 Lindbergh Award at a ceremony held at the Museum of Flight on Boeing Field in Seattle, Washington. If you've never been there it is well worth a visit. The museum's centerpiece is the hangar-like Great Gallery, which displays more than fifty full-size vintage aircraft, a number of which are suspended in air from the steel-and-glass roof. A full-scale SR-71 rests easily within fingertip distance, but wise museum curators have provided an adequate distraction: a SR-71 cockpit. Burt sat in the seat for 5 minutes studying the control panel before announcing "I gotta get me one of these!" The first presidential jet (used by Eisenhower in 1959) is there, as well as some early commercial planes and bizarre manifestations of aviation design such as the Gyrodyne QH-50C Drone, a 1963 unmanned anti-submarine helicopter. A more whimsical corner highlights homebuilt aircraft and transcontinental gliders, including the Gossamer Albatross II, whose propellers were connected through a series of gears to a constantly pedaling

We also said Hello to Mike and Sally Melvill's VariViggen, N27MS that they donated to the Museum of Flight some years ago.



Burt honored with Lindbergh, Skunkworks Awards

The Charles A. and Anne Morrow Lindbergh Award was created in 1977, the 50th anniversary of Charles Lindbergh's epic New York-to-Paris flight. It was originated by friends of the Lindberghs at The Explorers Club in New York City. Since its formation, the mission of the Foundation has been to encourage present and future generations to "discern nature's essential wisdom and combine it with our scientific knowledge..." (Charles A. Lindbergh) and "balance power over life with reverence for life" (Anne Morrow Lindbergh).

Past Lindbergh Award honorees include astronaut Neil Armstrong, Air Force legend Gen. Jimmy Doolittle, scientist Jacques Cousteau and inventor Dr. Paul MacCready.

"Burt Rutan's life and work reflect the same thoughtful wholeness of vision that characterized the philosophy and partnership of Charles A. and Anne Morrow Lindbergh," said Reeve Lindbergh, foundation president and youngest daughter of Charles and Anne Morrow. The foundation was created to further Charles and Anne Morrow Lindbergh's shared vision of a balance between technological advancement and environmental preservation.

Continued on page 3

WEB SITES

National Transportation Safety Board Accident Reports

http://www.ntsb.gov/aviation/Accident.htm

Canard fliers website

http://www.ez.org/

RAF HOURS: Rutan Aircraft is officially open every Wednesday. Please call between 10 am - 2 pm (661) 824-2645 and give your name, serial number and nature of the problem. If you are not in an emergency situation, we ask that you write to Mike.

Note — Sometimes you can catch Tonya at RAF Monday

thru Friday. She is in and out. Try and try again.

When writing to RAF, send along a stamped, self addressed envelope, if you have builder's questions that need to be answered. Please put your name and address on the back of any photos you send.

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RAF is no longer accepting multi-year subscriptions. Please renew only after your current subscription has expired.

If you are building a RAF design, you must have the following newsletters: VariViggen (1st Ed) CP 1 to current VariViggen (2nd Ed) CP 18 to current VariEze (1st Ed) CP 10 to current VariEze (2nd Ed) CP 16 to current Long-EZ CP 24 to current Solitaire CP 37 to current Defiant CP 41 to current

A current subscription of the Canard Pusher is mandatory for builders, as it is the only formal means to distribute mandatory changes.



Adventure is the essence of Life

Our thrill-seeking brother Dick Rutan almost met his maker (according to his version of the story) when he and four other arctic enthusiasts were stranded in the North Pole.

Dick was a last-minute addition to a sightseeing airplane trek to the North Pole last May, a grand adventure headed by expert arctic flyer Ron Sheardown. You couldn't fly with a better guy. Ron, who holds US airline transport, US commercial and Canadian senior commercial pilot licenses with instrument and helicopter ratings, is licensed to fly single and multi-engine land and sea aircraft. He has over 15,000 hours flight time gained in all 50 US states, Europe, Mexico and South America, including more than 9,000 hours in the Canadian Arctic, Greenland, Norway, Siberia and Alaska.

The first leg of the journey was successful. They departed Barrow, AK in Ron's 4-year-old Russian Antonov An-2 biplane with a Cessna 185 on their wing, landed at the North Pole "to make yellow snow," as Dick explains it, and continued on course to Spitsbergen, Norway.

It was a walk in the park for the two airplanes and seven men until seven hours into their 20-hour return flight when they made a second landing on the frosty surface of the North Pole.

Ron was flying with Dick in the right seat. Jan Haugland, director of the Norwegian Polar Institute and explorers Jim Bowden and Walt Parker were in the back of the plane. The lighter of the two aircraft, a Cessna 185 flown by Lee Wareham and John Pletcher, was equipped with ski-landing gear. It touched down and skidded to a safe stop while the An-2 flew a low fly-by.

"In hindsight we should've flown a circuit while the 185 guys drilled the ice to check its thickness," Dick explained later. "But we thought it looked good, the Cessna was stable, the color of the ice was right for a landing. What we didn't take into account was that the Cessna was on skis and we were on wheels."

The biplane landed beautifully on the glass-like surface and rolled to a stop, engines roaring. Ron and Dick looked up from the cockpit to see the 185 guys, Jim and Walt, dancing wildly in the snow. Surprised by their buddy's behavior, it took a moment for the meaning of this impromptu game of charades to sink in. "GO," Jim and Walt danced, waving their arms. "FLY! GO GO GO!"

It was too late. As Ron fired up the engines for a take-off roll the nose of the biplane collapsed beneath them and they were suddenly staring down into the barrel of a frigid ice hole.

For ten anxious minutes Ron remained in the slowly sinking aircraft, a rope tied around his waist, to retrieve over 400 pounds of supplies: warm clothing, rope, radio equipment, signal flares and a shotgun. (No one goes anywhere in the tundra without a shotgun, Dick explained, because humans are the Big Macs of the polar bear diet). Once they

had established a campsite on solid ice, Jim and Walt flew off in the Cessna to get help.

The adventurers knew they would be rescued in a matter of hours or a few days at worst. They began cutting snow blocks to build an igloo in case a storm blew up. Igloo construction was a lot more involved than Dick had suspected. "We never did figure out how to engineer the roof," he said. Instead they used a tarp and a ladder to secure the top of the shelter.

Meanwhile, back at home in sunny California, the news of Dick's plight reached his family's ears.

"My brother has nothing but fun," Burt groused, "while all I do is go to work."

"I guess he got a little bit more than they bargained for on this trip," Pop said philosophically, "but in these days of GPS and all the technology, being stranded at the North Pole is hot quite the remote thing it once was."

A reporter who called our home was mystified at the family's ho-hum response to Dick's most recent escapade. Continued on page 4

Awards -

Kristina Lindbergh, Vice President of the Foundation and granddaughter of Charles and Anne Morrow Lindbergh, presented the Lindbergh Award to Burt.

Last February Burt was pleased to receive an award in the name of his hero, Clarence L. "Kelly" Johnson. The Engineers' Council presented Burt with the Lockheed Skunk Works Award 2000, a prize that recognizes individuals who enhance the image of engineers and engineering in the public eve.

Chief Engineer of Lockheed Martin, Clarence "Kelly" Johnson started the Skunk Works in 1943, after designing two of the first commercial airliners in the world, the Lockheed Electra and Constellation. The idea of the Skunk Works was to stay away from bureaucratic management, enabling the engineers to work quickly and efficiently with a minimum of corporate oversight. "The Skunk Works is a concentration of a few good people solving problems far in advance - and at a fraction of the cost - by applying the simplest, most straightforward methods possible to develop and produce new products," explained Mr. Johnson (1910-1990).

Today Skunk Works, a division of Lockheed Martin, is listed in the Random House Dictionary: "Often a secret experimental division, laboratory or project for producing innovative design or products in the computer or aerospace field."

To this day Burt continues to be inspired by the great Kelly Johnson's manifesto.

Accident Report

NTSB Identification: LAX00LA182 Accident occurred MAY-02-00 at FALLON, NV Aircraft: SMITH FOX LONG EZ, registration: N7FS Injuries: 2 Uninjured. On May 2, 2000, at 1435 hours Pacific daylight time, an experimental Fox Long EZ, N7FS, was substantially damaged during a hard landing at Fallon Municipal airport, Nevada. The private pilot and one passenger were not injured. Visual meteorological conditions prevailed for the personal flight, which was operated by Mountain West Equities, Inc. under 14 CFR Part 91. The local area flight originated from Fallon, exact time unknown, and no flight plan was filed.

NTSB Identification: MIA00LA183 Accident occurred MAY-26-00 at COLLEGEDALE, TN Aircraft: HAYS LONG-EZ, registration: N9JZ Injuries: 2 Uninjured. On May 26, 2000, about 1800 eastern daylight time, a Hays Long-EZ, N9JZ, registered to a private individual, operating as a Title 14 CFR Part 91 personal flight crashed in the vicinity of Collegedale, Tennessee. Visual meteorological conditions prevailed and no flight plan was filed. The airplane sustained substantial damage and the private-rated pilot and private-rated passenger were not injured. The flight originated about 1 hour before the accident. According to the pilot, he just bought the airplane, and after about 30 minutes of in-flight familiarization and two landings conducted from the back seat, he and the delivery pilot decided to perform a fullstop landing and switch seats. The accident happened as a result of getting too low on final approach with speed brakes extended, and not being familiar enough with its cockpit control location to retract them in a timely manner.

NTSB Identification: LAX00LA210 Accident occurred MAY-31-00 at LANCASTER, CA Aircraft: Hilayard DRAGONFLY, registration: N22EX Injuries: 1 Uninjured. On May 31, 2000, at 1232 hours Pacific daylight time, an experimental Hilyard Dragonfly, N22EX, sustained substantial damage when it veered off the runway and nosed over during landing at William J. Fox Field, Lancaster, California. The personal flight was being operated by the owner under the provisions of 14 CFR Part 91. The private pilot, the sole occupant, was not injured. The flight originated at Fox Field about 1210. Visual meteorological conditions prevailed and no fight plan was filed. Upon landing on runway 24, the airplane veered left and departed the runway. During the sequence, a wing broke off, and the airplane nosed over. The automated weather reporting station on the field recorded the winds as from 240 degrees at 12 knots with gusts to 14 knots.

NTSB Identification: NYC00LA160 Accident occurred JUN-11-00 at WEST CHESTER, PA Aircraft: Bryant/Rhodus LONG-EZ, registration: N5534V Injuries: 2 Minor. On June 11, 2000, about 1630 Eastern Daylight Time, a homebuilt Long EZ, N5534V, was substantially damaged while landing at Brandywine Airport, West Chester, Pennsylvania. The certificated commercial pilot and passenger received minor injuries. Visual meteorological conditions prevailed for the personal flight. No flight plan had been filed for the flight that was conducted under 14 CFR Part 91. In an interview, the pilot reported that he had just departed, and was returning for a landing when the accident occurred. He described the approach as shallow, with reduced power, at 80 knots. He was attempting to touchdown on the numbers at the end of Runway 27. When the airplane was less than 1/8 of a mile from the end, it encountered sinking air and dropped about 50 feet. The pilot added maximum power, and pulled full aft on the control stick. The airplane struck terrain and skidded onto the runway. The pilot reported there were no problems with the airplane. He reported the winds as from the west at 5 to 10 knots with occasional gusts to 15 knots. An inspector from the Federal Aviation Administration (FAA) reported that the terrain leading to the approach end of runway 27 sloped down. The airplane impacted the terrain about 100 feet short of the runway, and 20 feet below the level of the runway. The airplane slid onto the runway and stopped 240 feet beyond the approach end. The landing gear was found at the initial ground impact point. Fuel was found in both wing tanks. According to data from Airport Facility Directory, Runway 27 was 3,347 feet long, 50 feet wide, and had an asphalt surface. The landing. threshold was displaced 250 feet. A check of three nearby airports revealed winds from 240 to 250 degrees at 9 to 13 knots. The pilot reported his total flight experience as 1,100 hours with 300 hours in airplanes. He reported that he had accumulated 110 hours in the Long-EZ, and flown it about 7 hours in the preceding 90 days. •

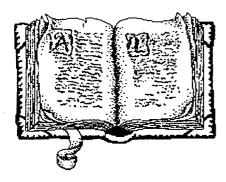
North Pole _____

"Aren't you concerned about him?" he asked breathlessly.

"Sure we are," I explained. "But everyone got out of the airplane ok, the weather is good, not below zero anyway, and there's no wind. Dick's having the time of his life." Indeed, Dick was sorely disappointed when, just 13 hours after the incident, a commercial de Havilland Twin Otter arrived to pick up the marooned adventurers. "We should have been out there longer—for at least a week—to make it a true adventure," he said.

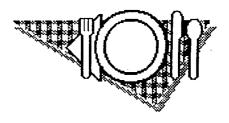
"I don't regret a moment of it," Jim Bowden said. "I'd do it again."

Dick will talk about his North Pole experience and the plan for retrieving the An-2 at Oshkosh.

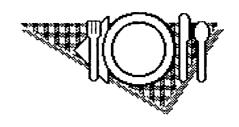


"Oshkosh Memories" By Jill Rutan Hoffman

Look for this collection of fond, warm, and enlightening stories on sale at last! It is filled with great stories as told by Mom Rutan, Pop Rutan, Cliff Robertson, Julie Clark, Patty Wagstaff, Dick Rutan and Sean Tucker to name a few. The 240-page book costs \$13.95. Fifty percent of the net profit from the first year of book sales will be donated to the Young Eagles program. Oshkosh Memories will be available in the EAA Warehouse/Bookstore during AirVenture. If you can't make it to Oshkosh it can be ordered through Barnes and Noble bookstores or Amazon.com. or order it on Jill's www.lookingskyward.com.



This year the Friday night CSA Hot Dog Roast will include hamburgers and world-famous Wisconcin bratwurst! Reservations are NOT required but email Jim Rodrian with your choice so he can figure how many dogs, burgs and brats to order. CSApicnic@elsyn.com



Missing U at Oshkosh

We are sad to report Burt and Dick's folks will not be able to attend this year's Oshkosh AirVenture for the first time in a quarter of a century. George and Irene Rutan, recognized throughout the canard community as "Mom" and "Pop," have not missed a single air show since the year their boy Burt wowed Oshkosh crowds with his VariViggen back in '73.

"I took Irene once and she's hauled me back ever since," Pop explains.

Mom fell ill on June 1st (their 63rd wedding anniversary) and has not yet recovered enough to make the

long journey cross-country.

During the last 27 years Mom and Pop attended every talk, lecture and ceremony that their sons performed at Oshkosh no matter how far they had to hike across the airport, no matter how exhausting the schedule. They are easy to recognize — Pop always sits at the head of the table near the podium with Mom nearby in her go-cart, listening to Burt and Dick spin tales about scud-running in the dark, fixing engines on the fly, first flights of new designs and space odysseys, as if hearing it for the first time, as proud and patient as any set of parents at their children's stage recitals.

This year, as always, we will bear the heat, eat bad food, suffer insect bites and make mad dashes for cover from unexpected downpours. But we will also visit with our many Oshkosh friends and view a

fantastic lineup of unique aircraft stationed wing-to-wing as far as the eye can see.

And we'll say, gee, Mom & Pop wish you were here.

Burt, Mike & Dick's 2000 Oshkosh Schedule

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25 July
             1930 - 2015 — Theater in the Woods — Dick Rutan
             1000-1100 — Around the World Balloon Challenge — Eclipse Pavilion — Dick Rutan
27 July
27 July
             1200-1300 — KidVenture Appearance — Aviation Hero Stage — Dick Rutan
27 July
             1300 - 1415 — Personal Air & Space in the 21st Century — Eclipse Pavilion — Burt Rutan
27 July
             1330 - 1430 — Voyager — Museum Presentation — Dick Rutan
28 July
             0745 - 0845 — Teacher Welcome — Aviation Hero Stage — Dick Rutan
28 July
             0830 - 0945 — Mojave Update — Eclipse Pavilion— Burt Rutan & Mike Melvill
28 July
             1130 - 1230 — Voyager Flight — Eclipse Pavilion — Dick Rutan
28 July
             1330 -1430 — Voyager — Museum Presentation — Dick Rutan
             1700 - 2030 — Central States Association Hot Dog Roast — Nature Center Hospitality Tent
28 July
29 July
             0830 - 0945 — Life After Airliners — Eclipse Pavilion — Burt Rutan & Dr. Bruce Holmes
29 July
             0930 - 1100 — Voyager — Museum Presentation — Dick Rutan
29 July
             1100 - 1200 — KidVenture Appearance — Aviation Hero Stage — Dick Rutan
29 July
             1300 - 1415 — Personal Air & Space in the 21st Century — Eclipse Pavilion—Burt Rutan
29 July
             1300 - 1500 — Earthrounders Forum — Nature Center Tent — Mike Melvill & Dick Rutan
30 July
             1000 - 1100 — Around the World EZ Flight — Eclipse Pavilion — Mike Melvill & Dick Rutan
30 July
             ·1100 - 1200 — KidVenture Appearance — Aviation Hero Stage — Dick Rutan
30 July
             1330 -1430 — Voyager — Museum Presentation — Dick Rutan
             1600 - 1700 — An Arctic Adventure — Vette Theater in Muesum — Dick Rutan
30 July
30 July
             2030 - 2200 — Earthrounder — Theater in the Woods — Mike Melvill & Dick Rutan
31 July
             0830 - 0945 — Tent Talk Show — Eclipse Pavilion — Burt Rutan & John Roncz
31 July
             1100-1200 — KidVenture — Aviation Hero Stage — Dick Rutan
31 July
             1330 -1430 — Voyager — Museum Presentation — Dick Rutan
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All date & times are subject to change.

Be sure to check your EAA AirVenture program

or search www.airventure.org/forums/

RAF Merchandise Order Form

Owners Manuals	Long-E2	Z (\$9)	VariEze (\$8) Solitaire (\$8)	Defiant (\$15
Posters		\$15	23x33 Long-EZ "break-down" drawing	(see CP 33)
Want your poster signed by Burt Rutan?		\$25	20x29 Chronological lithoposter Beautiful quality poster depicts fami of RAF projects, including Voyager (se	ly ee CP 52)
Indicate yes, and write name to whom you want it signed.		\$12	11x17 Jim Sugar night poster This unique sunset scene of Voyager VariViggen and Long-EZ was shot by Geographic photographer Jim Sugar	National
		\$8 11 x17 Defiant on water		
	_	\$12	2 18x23 Canard 3-ship VariViggen, VariEze and Defiant fly in harmony	
		\$8 11x17 Long-EZs in trail		
		\$2	8x10 color photos: choose Long-EZ, Solitaire or (black & white)VariVigg	
The RAF Encyloped can be purchas TERF 11411 Culve Brighton, MI	sed from er Rd 48116 95.00 7-8029		Long-EZ name patches SOLDOUT VariEze silhouette patch VariEze Ball Caps (limite Solitaire silhouette patch Solitaire name patches Defiant name patches (variViggen patch VariViggen name patch	es - 5.00 d supply)- 10.00 hes - 3.00 - 1.00 only) - 1.00 - 5.00
Plans	I	Viggen Large Speed)-235 Roncz	ng Moldless Composites Manual n RC Model Plans rudder plans brake plans engine installation canard plans belhorns plans	- 14.50 - 14.00 - 18.50 - 10.00 - 21.50 - 42.50 - 10.00

Postage & Handling included in price

Flyin' with Friends

Sept 8-10 Sacramento EAA Golden West Fly-In

Sept 29 Oct 1 Rough River 2000 (800) 325-1713

Oct 12 - 15 Mesa, AZ EAA Copperstate Fly-In

Oct 28 - Oct 29
Mesquite, NV
Halloween R.A.C. E.
For reservations contact
Virgin River Casino
(800) 346-7721 or
Casablanca Resort &
Casino (800)459-7529

Nov 26 Jean, NV R.A.C.E. Kilo Trials

If anyone would like to fly in on Saturday and stay overnight the Gold

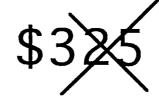
Strike Jean Casino's number is: (800) 634-1359

Aikins Lodge & Jackpot has blocked rooms for the racers. There are no

blocked rooms for the R.A.C.E. events at Mesquite or Gold Strike Jean.

Contact Shirl for any questions at 520-685-3148 or via email... mreracer@primenet.com

RAF CD-ROM Encyclopedia!!



Reduced to

\$295

- Canard Pusher Newsletters #1 (1974) thru' #83 (1996) with Searchable Format!
- Aircraft plans (except for Defiant), Texts, Brochures, Operators Manuals & Photographs!
- The Moldless Composite Homebuilt Sandwich Aircraft Construction Manual.
- Many Historical & Milestone Articles on the Development of the Composite Aircraft Industry.

Note: This product is intended for entertainment purposes only. It is not a license to build aircraft, nor does it include any of the necessary templates.

TERF has a new phone number! (734) 477-8029 Check out the TERF website at http://www.terf.com/rutan.htm

Spin-On Oil Filter Adapter for Lycomings

B & C Specialty Products' latest product is the neatest idea I have seen in a long time. It is a 90-degree, spin-on oil filter adapter for Lycoming engines. It is beautifully made by CNC milling out of a solid aluminum billet and bolts onto the accessory case in place of your oil screen housing or AC spin on filter adaptor. It fits perfectly, does not interfere with the magnetos, the vacuum pump or even the mechanical tachometer drive. It also has plenty of clearance on your engine mount and firewall, important considerations when you operate an EZ!

I installed one on N26MS and now have a full flow, spin on champion oil filter, with no high pressure hoses to a remote mounted filter which could leak. It comes with everything you need to install it: a new gasket, new aluminum washer for the vernatherm, and new copper washer for the oil temperature sensor. They even send a small container of the proper sealant for the gaskets. Of course it comes with new Lycoming bolts to mount it.

It is fairly expensive at \$395 but is available to EZ flyers until the end of 1996 for \$350. I am extremely pleased with mine and I heartily recommend it for anyone running a Lycoming engine on an EZ. A fuel flow spin-on filter allows 50 hours between oil changes and prolongs the life of your engine.

Give B&C a call at (316) 283-8662 or fax (316) 283-8000. You'll be glad you did! *Mike*



FLUSH, INTERNALLY MOUNTED ANTENNAS

A complete line of antennas, specifically designed for, and flight tested on, composite aircraft. The antennas are tuned for maximum performance and in general those who have used them so far report reception is <u>doubled</u> over standard external antennas.

VariEze builder/flyer Bill Butters has started a company to develop a full range of buried antennas. These are normally supplied with a BNC connector built into the actual antenna, but can be supplied without connectors to include enough length of co-ax cable to facilitate easy installation with minimum weight and bulk.

Call Bill Butters 800-758-8632 Advanced Aircraft Electronics, PO Box 4111, Florissant, MO 63032



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