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Monthly Newsletter of the Calgary Ultralight Flying Club

May 2000

From The Cockpit

by Brian Vassuer

In my first article as president of the club I expressed my opinion on passenger carrying in ultralights. At the last meeting we heard again that it was likely that this was going to happen fairly soon, although we're not sure exactly what the regs are just yet.

I have two concerns about ultralight passengers that may be addressed by the changing legislation, but I'll review them again anyway.

First, I think there needs to be something more than a normal ultralight license required for passenger carrying. I think the Commercial Ultralight (Instructor) license would be appropriate because that's essentially what's happening with new students. The existing Recreational Permit also seems to meet this need adequately. Both are easy to get, don't require a lot of hours or money and provide reasonable assurance that pilots have the necessary experience to fly safely with a passenger. I'm not sure if a new licensing class is being proposed but I don't think it would be appropriate as the RPP with 25 hours of total time required is about the minimum

certification that I'd like to see of someone carrying passengers.

The second concern I have regarding passenger carrying is that I don't believe all the existing 2 seat ultralights meet the standards for passenger carrying. The Canadian amateur built regs (Chapter 549) describe how to build an ultralight to homebuilt standards. When you read through these there's really nothing difficult about meeting this standard. There is the requirement for annual inspections which can be done by the builder. Most or all of us do this anyways, the difference being that we don't necessarily keep the same paperwork. Your aircraft will require a few extras we don't usually see such as minimum instrumentation, a fire extinguisher, carb-heat and when appropriate a metal firewall. From the ultralights I've seen the typical additional instruments we'd need would be a compass, temperature guages and maybe oil pressure. Fire extinguishers are \$10 at Canadian Tire Carb-heat is a little more work but can easily be retrofitted for \$100 -\$200.

In addition to the minor upgrades you might need you would also need an inspection by a designated inspector who would identify any items which aren't up to aircraft standards and potential safety risks such as incorrect bolts or incorrect control routing. The inspections I had on my Minimax were very straightforward and I (continued on page 2)



Ron Labey's SE5A Replica at Indus

Photo by Adrian Anderson

Cockpit - continued from page 1

ended up building it to Chapter 549 standards even though it wasn't required for C-I registration.

There have also been several Advanced Ultralights which allow for passenger carrying but these require certification and standards from the manufacturer which can be more difficult to manage than the existing Chapter 549. In any case it did seek to ensure that you would be flying a

safe aircraft according to the manufacturer which goes toward protecting passengers.

I'd like to do whatever we can to prompt the general public into involvement in aviation, and the low cost of ultralights is certainly a promising way to catch peoples' interests. Let's just be really careful not to cut corners doing it. There's no doubt in my mind that the 18 fatalities last year didn't do anything positive to promote ultralights as a safe activity and doesn't boost our credibility with the regular GA crowd. The last thing I want for any of us is to be regulated out of existence becaus we cut too many corners.

If passenger carrying is truly on it's way then let's make it a showcase for the rest of the aviation community and not a statistic for the regulators. >>

For Sale

Wanted - An ultralight for \$5000 or less, in good flying order, strut braced, and registered to the person selling the plane. Rex McCarthy 403-504-1962 (5/00)

Bushmaster II - 1986, Rotax 503, TTSN 120, cabin heat, complete logs, assembly drawings and construction manual. ASI, ALT, VSI, TACH, EGT, CHT, slip indicator. White with black and red trim. Nice clean, well cared for aircraft. New throttle and choke quadrant, all engine and fuel lines and cables just replaced. Digital pictures available. Current location Edmonton, AB, \$16500.00 or best offer. Reg Lukasik 780-459-0813 (4/00)

Beaver RX-550 - Rotax 503 dual carb, Warp Drive prop, electric start, enclosure kit, TTAF 625, TTE 105, \$9900. Victor Thiessen 403-546-4449 (4/00)

Bushmaster - 1986, 2-seat, dual-control, fully enclosed cabin, 503 Rotax, ground adj prop, 510hrs, complete with crop spraying equipment, always hangared, \$12000. Ken Giesbrecht 403-572-3294 (3/00)

Skis & floats - Powder coated skis for trigear or tail-dragger \$850, floats \$1500. Don Leonzio 250-427-2046 (3/00)

Hanger - One half share in indus hanger for sale, 38 ft door facing east call Ray Waller at 274 4388 or cell 540 2492 (3/00)

Flying-Flea HM-293 - Famous MIGNET

Aircraft redesigned by GRUNBERG as an Ultralight. More than 100 flying. French plans and brochure with English translation, \$110.00, mailing included. Paul PONTOIS, 1890 Rang des Chutes, STE-URSULE (Quebec) JOK 3M0 (3/00)

Yarrow Arrow- Enclosed heated cab, dual-control side by side seating, 55 HRS TT on new 503 dual CDI dual carb, Alpha 100 radio, alum. skis, hangared. \$13,000.

Located in Lac La Biche AB. PH: 780-798-2404 FAX: 798-3011, e-mail: rckb@telusplanet.net (1/00)

MiniMax - Rotax 447, GSC Ground adjustable prop, full panel, always hangered, only 115 hours since new. \$9,500. OBO. Dale 293-3826. (12/99)

Forward ads to Bob Kirkby 569-9541.

Skywriter

Skywriter is the official newsletter of the Calgary Ultralight Flying Club and is published 12 times per year. Forward your articles and letters to:

Editor: Bob Kirkby 569-9541 e-mail: kirkby@telusplanet.net

Assistant-editor: Bernie Kespe (see below)

Calgary Ultralight Flying Club

Meetings of the Calgary Ultralight Flying Club are held on the second Thursday of every month, except July and August, at 7:00 pm, at the Northeast Armoury, 1227 - 38 Avenue NE.

President: Brian Vasseur 226-5281 e-mail: vasseurb@cadvision.com

Vice-President: Stu Simpson 255-6998 e-mail: simpsont@cadvision.com

Secretary: Bernie Kespe 255-7419 e-mail: kespeb@cadvision.com

Treasurer: Carl Forman 283-3855 e-mail: formanc@cadvision.com

Director: Dan Mitchell 238-4254 e-mail: mitchell@cadvision.com

Past President: Wilf Stark 935-4248 e-mail: wstark@compuserve.com

Visit the CUFC web site: www.cadvision.com/cufc/

Flying Events

May 14 - Sundre Flying Club's annual Mother's Day fly-in breakfast. Contact Alf Bicknell 403-638-2947.

June 6 - Lacombe annual fly-in breakfast. Contact Dalton Deekrick 403-782-3827.

June 25-July 1 - Ultralight Adventure 2000. Calgary to Castlegar and return. Contract Stu Simpson 255-6998.

July 15 - Kirkby's annual fly-in breakfast 8:30 - noon at Kirkby Field. Contact Bob Kirkby 569-9541.

July 16 - Vulcan annual fly-in breakfast. Contact Cody Whiteside 403-485-2083.

If you know of any other fly-ins or airshows in Alberta this summer please email info to Bob Kirkby for next month's Skywriter: kirkby@telusplanet.net

Home Made ???

by Andy Gustaffson

I often hear the term "home made" aircraft in the media. Especially when there has been an accident or an incident regarding an amateur built aircraft. The last one was an Exec helicopter in Innisfail Alberta, that went down with tragic results. When I hear the word "home made" I imagine a person equipped with all thumbs, trying to wire together some kind of contraption that this person hopes will fly. Not good, and this image is light-years away from the truth about building it yourself.

The Amateur builder, as it should be called, has to follow Canadian aviation rules and regulations with ongoing inspections until the aircraft is ready for its first flight. Most builders opt for kits that are factory made, leaving the builder to assemble the parts, to finally have an aircraft that will be as good or better than its factory built counterpart.

The Ultralight classified aircraft of today is also an amateur built aircraft. Although no inspections have to be made, the quality of today's factory manufactured kits are second to none. All materials are aviation grade, all hardware are AN grade. A lot of

Challenger

Puddle Jumper Floats

Puddle Jumper Floats

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Jo-Anne Rutherford
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Fax: 250-426-0941
email: bruce@just-plane-fun.com

manufacturers have come and gone and only the best are still in business. The freedom of flight is still alive and well here in Canada. Our flying clubs are here for all of us aviators for the promotion of flight safety and to give advice for the beginner in assembling of the kits. Some more advanced builders scratch build their aircraft. Scratch building means building from plans using approved materials. Some kit companies offer ready-to-fly planes and should be considered if the builder is not comfortable in assembling of his or her new set of wings. I built my first aircraft back in 1994. After receiving my kit, I spent 6 incredibly rewarding months seeing my dream take shape. Starting with inventory

of the kit, assembling of the many parts, covering with fabric and finally painting. It can not be told the feeling of accomplishment I felt when I finally lifted off on that first flight around the circuit. The only adjustment being the installation of a rudder trim tab.

My aircraft is registered as an Ultralight aircraft and was inspected by an AME before the covering phase. My kit was manufactured by Quad City Aircraft, a leading US company in the business. The Challenger II model has had an incredibly good safety record, which was part of my reason for choosing this particular model. Most of the accidents that happen are not the aircraft's fault. Most accidents can be blamed on the pilot. Aircraft of any kind MUST be operated and maintained with the highest regard for safety. If this is done right, only then can we continue to enjoy the freedom and wonderful world of aviation. Let's be careful up there. >



Andy pre-flights his Challenger

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AVIATION 936-5767

BLUE YONDER

Located at Indus-Winter Aire-Park

Ultralight Adventure 2000

If you've ever wanted to fly through (read around) the mountains, now is your chance to do it in an organized group. Stu Simpson is busy organizing the Ultralight Adventure 2000 for the Club.

This year's trip is planned for June 25 to June 30. The route is Calgary to Cranbrook the first day, then Cranbrook to Castlegar the second. One day flying around the Castlegar area then returning via the same route on the fourth and fifth days. A ground crew has already volunteered to follow the flock of Dragonflies (or is that a gaggle?) carrying fuel and food.

Ultralight Adventure 2000 Warmup

To prepare for the big trip a smaller mountain trip is being planned the first or second weekend in June (depending on when the snow is melted off the Kananaskis highway). This will be a one-day flight from Calgary to the Highwood pass, north up the Kananaskis valley to Highway 1, then back to Calgary. Fuel stops are planned for a grass strip in the Highwood pass and Springbank. A ground crew will be needed for this trip also.

Anyone interested in participating in either of these trips (flying or driving) please contact Stu Simpson at 255-6998.

Last year's adventure to Cold Lake was found to be very rewarding by all those who participated - come on out and join the fun.



New Club Crest

At the April meeting members voted on a new club crest from four design submissions, each with several variants. The winning design for submitted by Bernie Kespe.

Congratulations Bernie - don't forget to claim your prize!

The new crest will eventually make it's way onto the Skywriter, new club hats and other paraphernalia.



Feature

Peter M. Bowers' Fly Baby 1A by Ron Wanttaja

Description and Specifications

The Fly Baby is a single-seat, open cockpit, folding-wing monoplane powered by engines ranging from 65 to 100 HP. It was originally designed in 1960 to compete in the first (and so far, only EAA design competition). It is built primarily of wood, with fabric covering. Most are powered by Continental A-65. C-75, C-85, or O-200 engines. Performance is sprightly; a bit better than that of, say, an Aeronca Champ.

While a single-seat airplane, the Fly Baby isn't small. It has a wingspan just two feet less than a Cessna 150. It's got a big cockpit. Pete Bowers is six feet two inches tall, and I weigh about 250 pounds. That gives you an idea of the range of sizes that can be accommodated.

The Fly Baby can be built as a biplane as well as a monoplane. The t w o monoplane wing panels are replaced by four smaller ones, plus a center section for the top wing. The aircraft can be switched back and forth between versions in about an hour.

but it does take a helper. The biplane, while cool in concept, doesn't really offer too much. It's slower, and the wings don't fold. Still, its swept-back upper wings make it look a bit like a Bucker or Tiger Moth in the air, so if you'd really rather have a biplane, the Fly Baby would do the trick.

My advice: Build a monoplane first, to have something to fly, and build the biplane wings in your spare time after the first flight. The biplane wings take longer to build, since there are four panels and a center section, and they're swept rather than straight. If you build the monoplane wings first, you'll have something to fly while building the extra wings.

Т monoplane/biplan e issue is more than a wing swap...there are some internal braces a n d external tangs that have to be added to the fuselage. You can do this once the

fuselage is done (The prototype was converted after completion), but it is, of course, easier during construction.

Switching back and forth between the wings takes two people about an hour. This assumes the rigging has already been set. While I helped on a wing swap, I

h

Speed at 50ft 57 MPH 50' to touchdown 640 feet ground roll 660 feet add 30% safety factor = 1700 feet Suggested minimum runway length for this aircraft: 1975 feet

following performance figures. Note that

These were the measured results from a

field at 50 foot elevation during a 68-

add 30% safety factor = 925 feet

265 feet

450 feet

715 feet

this is with a 100 horsepower engine.

degree (F) day, with no wind:

Distance of ground run

Lift off to 50'

Total distance

[RJW Note: This seems reasonable. A 2,000 foot runway is pretty much my threshold of "pucker factor". I've landed in shorter fields, but they take good concentration. If you've got unobstructed approaches, the 660-foot ground roll is definitely doable.]

Best rate of climb speed **57 MPH** recommended 69 MPH Takeoff safety speed 63 MPH

[RJW Note: The best rate speed seems a bit slow. I've been using 65 MPH for best rate, but haven't actually run a flight test on it. I like the extra speed buffer over stall.]

Maximum level speed 112 MPH Maximum climb rate 1300 FPM Normal climb rate 1000 FPM

[RJW Note: Don't forget, these figures are with a 100 HP engine!]

(Continued on page 6)



never flew the biplane version. Other than appearances, there isn't much advantage. It's slower, and glides at an even steeper angle.

Some Real-World Performance Numbers

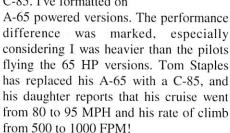
Howard Jones from Perth, Australia, was involved with the completion of an O-200 powered Fly Baby, and sent along the

Fly Baby - continued from page 5

Engines

Bowers recommends Continentals between 65 and 85 horsepower. The biggest engine I've heard of is a Lycoming O-290 (~125 HP). The 'Baby

isn't a fast airplane by any stretch of the imagination, so bigger engines don't really buy you much. You're better off with the lighter weight (and lower fuel burn) of the little Continentals. On the subject of the Continentals, both 'Babies I've flown have been powered by the C-85. I've formatted on



Other Engines

There's no reason at all you couldn't fly a Fly Baby on a Rotax 532 or 582. These

Ay Baby on a Rotax 332 of 382. These Order the plans

engines are considerably lighter than the Continentals, though, so you'll need a longer engine mount for CG. Might look a bit goofy. These two engines are only 65 HP, though. Volkswagens are too anemic. Draggy airplanes need large propellers, and your typical VW ends up

with a little 42" toothpick to be able to turn the 3400 RPM where it produces 65 HP. VW-powered 'Babies have flown, but the owners soon convert them to Continentals. An 85-HP Rotax 912 (four cylinder four stroke) would be ideal, if you've got the \$9,000 or so to buy one. Personally, I'm somewhat taken by some



of the smaller auto-engine conversions. I've met Reiner Hoffman of Stratus a number of times, and think his Subaru EA-81 conversion has excellent possibilities as a Fly Baby powerplant. For those who are looking for something cooler looking, HCI is developing a small radial engine and is using a Fly Baby as a testbed.

Ordering Information

Order the plans directly from the designer:

Peter M. Bowers 10458 16th Ave. So. Seattle, WA 98168

An information pack costs \$4. Monoplane plans are \$65, and the add-on plans for the biplane version are another \$15.

Visit the Fly Baby web site at: www.halcyon.com/wanttaja/flybaby.html

Ron Wanttaja is a Systems Engineer with a major Seattle-based Aerospace firm. and does a number of things that include satellite orbit/constellation design and analysis, launch vehicle and onboard propulsion system and operations concepts for space systems. He is also a freelance aviation journalist. He has written for a number of magazines, including PRIVATE PILOT, FLYING, SPORT AVIATION, FLIGHT LINE, and KITPLANES.

Short Runway

Pilot to Co-pilot: We are approaching an airport with a notoriously short runway. When I give the commands, execute them immediately!

Co-pilot: Roger.

Pilot: Flaps full down

Co-pilot: Roger. Flaps are full down.

Pilot: Air speed 180.

Co-pilot: Air speed 180.

Pilot: Landing gear down.

Co-pilot: Landing gear is down and locked.

Pilot: As soon as we touch down, I want engines in full reverse and brakes on maximum.

Co-pilot: Roger.

They hit the runway with engines in full reverse, screeching brakes. Two tires blow; and in a cloud of dust, the aircraft comes to a stop. They literally have to scrape themselves off the windshield.

Pilot: My God! That was the shortest runway I've ever seen.

Co-pilot: (Looking around both ways)...and the widest.

- Nobody's Flying School

Welcome to Lazarus Nobody's Flying School

This session we will hear the tale of Orly King, newly-hatched ultralightus expertus. Orly is one of the many people Nobody has taught to fly.

Orly awoke one spring day to a new obsession—that he would be a pilot. The only thing standing between Orly and his dream was his inability to face the truth: he didn't know how to fly.

So he decided to duel with his fate in an arena few men would dare. And only a miracle was sufficient to rescue Orly, after he decided to take the long way 'round to Nobody's Flying School. Like many overconfident individuals who believe they can do anything, Orly knew he was Nobody's Fool.

There's a little creek running parallel to Orly King's bean field, a delightful fog maker on crisp summer mornings like this. Lazarus Nobody cringed as he straightened out one knee and listened to the telltale cracking of his own joints. Hiding in trees is not a part of an instructor's daily routine.

But Orly had made the mistake of letting his old friend Lazarus know he had bought an ultralight— and that he had never flown before. Of course, Lazarus immediately offered to put Orly through the training program at Nobody's Flying School. But after meeting with stubborn rejection, Lazarus had smiled and said good-bye. No use trying to sell him lessons, thought Lazarus, his mind's made up. Instead, he had sold him a crash helmet, its little radio receiver cleverly concealed in the padding.

And so Nobody sat, one Saturday morning, in the crook of a large oak tree, watching from a distance as Orly and crew assembled an ultralight—a machine

the likes of which not one of them had ever seen before.

By going slowly and checking each step, the group of excited fellows had actually erected the ultralight, and as far as Nobody could tell, they hadn't missed any critical steps. Orly was reading carefully in his flight manual now, accenting the boldface copy:

"WARNING: ULTRALIGHT FLYING IS DANGEROUS AS HELL AND YOU COULD GET KILLED OR MAYBE EVEN POKE YOUR EYES OUT! ACME ULTRALIGHTS ASSUMES NO RESPONSIBILITY FOR ANYTHING IT DOES, REGARDLESS OF WHAT OUR REPRESENTATIVES MAY PROMISE. IF YOU GET HURT, WE TOLD YOU SO." Orly recited that passage slowly, over and over. One of his buddies slapped his shoulder and he read on: "THE FIRST STEP IN LEARNING TO FLY IS TO CHOOSE A SAFE AREA TO FLY FROM."

Orly had noticed the softness of his field, but remembered the brochure said his ultralight only took 125 feet to take off. So he figured he had three times as much "runway" as he needed. He was wiping sweat from his palms as he walked back to his machine, and the snickering crowd.

Nobody, meanwhile, was watching and biting his nails. "I shouldn't be here," he whispered to himself, not realizing the radio transmitter was on. Orly had a puzzled look as he stared at the helmet under his arm. "Who said that?" he asked, and Nobody bit his nails as he vowed to stare more silently through the binoculars.

By the time Orly and friends had the little engine running smoothly, Nobody was on the verge of rolling out of his tree with laughter. But the sudden sobering thought that Orly was actually going to get in this thing and attempt to fly away pulled him bolt upright on his perch.

Orly was tightening the shoulder harness, looking around the craft and stealing occasional glances at his manual before handing it over to one of his many "assistants". Nobody said a short prayer.

One of the well-meaning "ground crew" of good old boys popped open a can of beer and toasted Orly, ceremoniously pouring the balance of the beer on the nosewheel of the ultralight.

Right after Nobody saw the plane begin to move, the noise reached the tree and his heart began an involuntary race. Radio in one hand, binoculars in the other, Nobody vowed not to interfere until—and if—it was essential.

Orly had neglected to wear eye protection, a mistake he will probably never make again. That beer on the nosewheel met the dust of the bean field, and one large slimy blob of it flew up and met him square across both eyes. Orly was probably quite well mentally prepared for the task ahead, but this problem had been overlooked in the manuals he had read.

As the ultralight wallowed faster and faster through the dust, Orly began to feel a strange new sensation in the pit of his stomach. The bumps were smoothing out; the noise of the wind was rising in his ears.

Nobody enunciated clearly into the radio transmitter: "Orly, relax and listen to me. I'm going to tell you what to do, and you're going to be all right. Put your hands in your lap, and relax."

Through his binoculars, Nobody saw an instant reaction to his instructions. Orly slammed his arms into his chest, and held them there. The craft was climbing steadily on a path which should clear the fence by a few feet. Nobody saw Orly wiping his eyes hesitantly; Orly peered skyward, crossed himself and replaced his hands quickly in his lap.

Great, thought Nobody, he thinks I'm the Voice from heaven, and that he's going to be taken care of — while I know he's probably going to be checking in to heaven in a few minutes himself.

Orly had finally gathered the strength to open his eyes again, looking forward and down. "Lord," he was saying softly, "do (Continued on page 8)

Nobody's - continued from page 7

you see the hill up yonder?" Nobody couldn't hear him of course, but he had seen the obstacles ahead of Orly, and was about to speak to him. At that moment, he heard the odd creaking of old wood, as the limb he was perched on gave way.

The freefall was brief; the water cold. Nobody watched as the little radio went bobbing down the stream, and he scrambled up the creek bank to get a look at Orly's impending crash.

But Orly was nowhere to be seen. The faint droning of his engine drew Nobody's attention to the west, where he could just see Orly's ultra light disappearing in the

morning haze. Scrambling to his jeep, Nobody took off across open country. Orly was headed straight for Nobody's Flying School, and all Nobody could think of was the spare radio in his office.

The traffic on Highway 99 was fierce, but Nobody passed Orly's position about a halfmile from the airfield. Polly Pitch, one of Nobody's instructors, was watering the hedge when he wheeled in and slid to a stop. P o 1 1 y

straightened up and began to trot to the office, but Nobody ignored her and dove through the door, swinging back out again with the radio in hand.

Polly went pale when she saw the expression on Nobody's face. "Lazarus,"

she cried, "won't you please tell me what's going on?"

The drone of Orly's ultralight came to a crescendo and drew her attention. Nobody raised the radio to-his lips and managed an unintelligible utter; Orly flew square through the billboard on the highway. Wood, paper and pigeons exploded — and Polly drew in a breath sharp enough to pop the harness of her halter.

Nobody had his eyes glued on the gaping ultralight-shaped hole in his (once) beautiful new billboard, and on Orly, still flying with his hands in his lap and eyes upturned. Just as a small cloud rolled over the morning sun, sending a shaft of

Nobody was behind Orly as he was crawling out of the ultralight, and in one fell motion he reached up and clipped Orly on the back of the head as he was removing the helmet. Orly went down with a whimper, and Nobody went to

When Orly woke up, he was in his bed at home. His sister was in the doorway, and outside his window his little ultralight was shining in the late morning sun. Feeling for the source of his pain, his hand ran across a slight bump on his head.

"What's going on?" he asked his sister.
"What happened?"

Nobody was standing down the hall, out of sight, and winked at Orly's sister before backing slowly away. she looked at Orly, and said: "You must of had a bad dream, Orly. You were calling out for someone named Nobody. Do you remember what you were dreaming?"

Orly scratched his bump and thought a moment. "Sis," he said, "Get Nobody's Flying School on the phone. The number is..."

"I know," she answered, and walked off to the kitchen, hiding a grin with her hands.

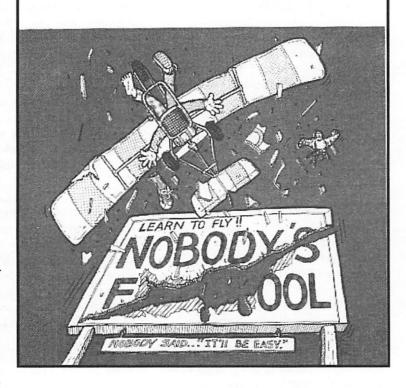
SUMMARY

If you think you can teach yourself all that's needed to fly safely, then you're Nobody's Fool, too. There's a well-worn saying in aviation that goes: "There are old pilots and bold pilots, but there aren't any old, bold pilots." Even clichés have a grain of truth in them.



Nobody's Fool

"Hot damn!" Orly was screaming.
"I told ya! could do it myself. I told ya!"



light down on Orly and his plane, the little ultralight straightened out, powered down and executed a perfect roundout and landing.

"Hot damn!" Orly was screaming. "I told ya I could do it myself. I told ya!"