

TURN ^{AND} BANK

OFFICIAL NEWSLETTER OF RAAC CHAPTER 85

December 1999

*Mark Munzel Visits
the Planes of*

Chino



*Working
Smart*

*Last Issue of the
Millennium!*



**Merry
Christmas!!**

Technical Guy

From the Western Canada RVator3

Bulletin Board4

Minutes
by Jim Hunter4

Live from Hollywood (or close to it)
Text and Photos by Mark Munzel.....5

Classified7

The Last Word
By George Gregory8

On The Cover:

Glen Hoffman's little guy and Pat O'Donnell's grandson taxi in for some 100LL

The TURN AND BANK is the monthly publication of RAAC Chapter 85 and is intended to keep members informed as to the club's activities, and to promote safety and technical excellence in the field of sport aviation. No responsibility or liability is assumed, expressed or implied as to the content of articles contained in the Turn and Bank: the intention is to provide a forum for discussion and exchange of ideas.

Newsletter contributions should be mailed to George Gregory, 19470-88th Avenue, Surrey, B.C. V4N 3G5 no later than the 12th of each month. Business Fax is (604)-469-3495. Please remember to indicate "attention George Gregory" on your fax.

Enquiries to the Membership Chairman should be mailed to Rob Prior, #204-130 E.11th St., North Vancouver, B.C. V7L-4R3

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AIRCRAFT
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CANADA
Delta Heritage Airpark
Vancouver, B.C.



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For inspections of Amateur Built Aircraft Projects contact the Recreational Aircraft Association Headquarters at 1-800-387-1028

Regular Meetings are held on the first Tues. of each month at 20:00 in the clubhouse:
Delta Airpark, 4103-104th Street Delta, B.C. Clubhouse phone: 596-3644

Mailing Address: Chapter 85, RAAC

c/o Delta Heritage Airpark, 4103-104th St., RR#3, Delta, B.C. V4K-3N3

Executive meetings are on the third Tues. of each month at 19:30 in the clubhouse.

Chapter aircraft pilots, mail cheques (Payable to RAAC Chapter 85) to:

Brad Short, 8052-122a Street.Surrey. B.C. V3W-7R4

RAAC National Homepage: <http://www.inforamp.net/~raac>

RAA Chapter 85 Homepage: http://home.istar.ca/~airframe/raa_85

Delta Heritage Air Park Homepage: <http://home.istar.ca/~bb4>

Source for CARS and Chapter 549 Airworthiness Manual: <http://www.aerotraining.com>

Technical Guy

From the Western Canada RVator

By Sam Buchanan
(sbuc@traveller.com)

I have received many comments on the pace with which my RV-6 is taking shape. Several builders have asked, "How do you build so fast?" The answer is certainly not due to my exceptional shop skills (some builders would probably leave my shop in disgust) but rather to a systematized and rational method of approaching the project. It is for the benefit of new and early builders that I submit the following thoughts about how to "work smart". However, all of us have limited time available for RV playtime, so it behooves all builders to get the maximum bang for their investment in shop time.

The construction hours listed in my builders' log are shop hours only. This does not include the time spent reflecting on upcoming tasks while in idle moments at the office or sitting on the thunder mug. And here in lies one of the keys to working smart:

1) Hit the shop door running. I suspect many novice builders spend a great deal of time standing at the workbench just staring at the project. This is not productive shop time. The time to figure out how you are going to approach a task is away from the shop. Instead of watching another mind-numbing sitcom, get out the preview plans and really study the sequence of steps that you face in the course of completing the next task. And that brings us to the next step:

2) Previsualize your shop work. Just this morning I had my first Pro-Seal Party. However, the tanks are taking shape just fine because I have already built six sets of

tanks. "Huh?" Yep, I have mentally completed several tanks by previsualizing the tools required, the steps necessary, and the mental prepping needed to "hit the shop floor running." When I started this morning, I already knew which tools I would need, what order in which I would proceed with the task, and I had a pretty good idea of how long it would take to complete the task. Consequently, I had that feeling of "I have done this before". And speaking of tasks:

3) Divide the project into small tasks. An RV is by far the most complex project most of us have ever attempted. This thing makes those Christmas bicycles we assembled pale in comparison! It is very easy to be overwhelmed by the sheer magnitude of the project at hand. The way to conquer this feeling of helplessness is to forget that you are building an airplane, and concentrate instead on building airplane parts! Just build the rudder - forget about how difficult the fuselage may be. Or, break it down even further: just build the stiffeners for the rudder.

Every time you walk into the shop, you should have the task in mind that you intend to complete by the time you leave the shop. Don't set the mark too high, keep in mind that your time may be limited. But if you want to work smart, you will never just aimlessly wander into the shop and try to figure out what it is you want to work on today.

Those of us who have been teachers see this as identical to the process we used to prepare lesson plans. The first step was to establish the objective for that day's lesson. Next we determined what tools (books, VCR, lab equipment, etc.) we need to attain that objective. We then made sure the tools were close at hand. And finally, we had a way to evaluate whether or not we met the objective.

It should be evident how this translated into our shop habits. It is very difficult to work smart if the shop is in a state of chaos. You need to

know exactly where every tool is stored. You need to know where those little brown bags with the little parts are located (you *did* inventory and label all the bags with their contents?) There is no reason why you can't do this headwork before you ever walk into the shop. Then as soon as you turn on the lights, fire up the compressor, and take your first gulp of iced tea, you are ready to work.

Also, when you have completed the evening's task, the last thing you do before leaving the shop is clean the tools, return them to their proper place (unless you have really taken this lesson to heart and have already previsualized tomorrow's task and laid out what you will need then - in which case you get an A+), and sweep up the filings. The whole point of this exercise is to prepare yourself and the shop for a new task. This is key to feeling that you are making real progress and generating a pile of airplane parts. It also means that tomorrow you will arrive in a clean shop that is optimized for working smart.

Well, hopefully you get the idea. There is more to be said about the construction sequences used to maximize shop efficiency and personal fulfillment. I apologize for bordering on verbosity, but hey, the whole point is to fly these critters as soon as possible so we can boast of one of those "First Flight" stories! I suspect that many projects have been abandoned because the builder lost his way, lacking a cohesive plan for seeing the project to completion. I readily admit that circumstances beyond our control can derail our projects, but let's be sure that it is not our own lack of shop discipline that is responsible for our RV becoming another orphan.

T&B



John Bell poses with a friend's Great Lakes biplane

BULLETIN BOARD

If you have questions or problems with your aircraft construction, we have members who have developed some expertise in various fields who have volunteered to advise you on methods, procedures and pitfalls in the capacity of **Builders' Counselors** something along the lines of the former designee programme. Please respect the fact that these are volunteers who may not appreciate late calls, and will not return long-distance calls on their answering machines. Also, none are inspectors, and although

experienced in their various fields, cannot be held responsible. It is and remains **YOUR** project. Their names and numbers are on page two and will be a regular feature of our contents page.

Please note that the locks for the clubhouse and the club hangar have been changed. If you want a key that works in both hangar and clubhouse, give Rob Prior a call at 980-7723.

Don't forget that the December meeting is the chapter's annual **Wine and Cheese**.

Please bring the following food items to the party: if your surname begins with:

- A-F: bring fruit plate, nuts or chips and dip
 - G-L: Bring cake, squares or cookies
 - M-P: Bring Salads, Dill Pickles, Olives
 - R-Z: Bring Celery, Carrots, Cherry Tomatoes as a veggie plate.
- Each dish that is brought to serve at the party should serve five people.
Questions? give John Vlaka a call at 820-9088. T&B

Minutes by Jim Hunter

Minutes of the General Meeting, 2 November, 1999

Prior 2/Weinkam: that the Minutes of the General Meeting (the AGM) of 5 October, 1999 be adopted as printed in the *Turn and Bank*. Discussion carried.

Correspondence:

Letter received from Vic Pettigrew of Montreal thanking the Chapter for its hospitality when he camped in our club-house whilst awaiting clearing WX on his cross-Canada trip (think it was in a Canuck or did he buy Bud's here and was taking it back East?) Vic joined the Chapter anyway!

Committee Reports:

Treasury: Tim Novak: Verbal report of current status and Tim gave a resume of the Annual Financial Report. For more or a printed copy, see Tim.

Membership: Rob Prior: 144 paid-up members. Total of 171 of all types. Dues for 2000 membership are now available; \$60 now, \$65 after the February GM.

Library: Don Souter: OK. We now have the RAAC Builder's Manual. Deposit your first-born.

Aircraft: Ted McHenry: Turbi flew 6.0 in October. Ted will be underway on a 100 hour and the Annual. Pilots are asked not to do things like spin the airplane around and blast through the hangar!

RAAC: Bruce Prior: Bruce will blurb the items of the RAAC AGM to Turn and Bank. We have the Builder's Manual. See Library section for the appropriate threats and sanctions.

Buildings: Dan Weinkam: OK somebody will be using the shop for a longish period. Talk to Dan if you need it.

DHAPCOM: Terry Wilshire:

1) There will be a small increase in charges in 2000 (probably about 1.5%)

2) There is NO 80/87 at DHAP or anywhere else; would appear that it is not being made due to the relatively small market. DHAPCOM will be looking into obtain-

ing MOGAS.

AIR-ABA: Terry Elgood: Talked about the 51% rule as it applies to homebuilts using pre-obtained parts or kit parts. Talk to Terry about any specifics but it would appear that the rules are about to be promulgated and they would appear to be very liberal (feature if you will a Navion which is to receive an auto conversion engine and thus be eligible as an amateur-built!)

Old Business:

Remembrance Day Fly-Past: George Spence: Last practice will be on Sunday, November 7.

New Business:

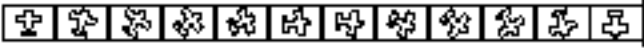
Our December GM will be the Annual Wine and Cheese. John Vlaka co-ordinating.

Walker/Weinkam: that we adjourn, so let's.

Jim Hunter/ scribblebloke.

T&B

AIRframe



Aircraft Portraits

Rob Prior
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mail to: Airframe@istar.ca
http://home.istar.ca/~airframe
#204-130 E 11th Street, Northvan, B.C V7L 4R3 Ph. 604980.7723

Have You Hugged Your Airplane Today?

LIVE

from Hollywood
(or close to it:)

World War II in the Air!

By Mark Munzel

*A Mitsubishi Zero
(the real thing, not
a T-6 look-alike)
scampers to display
altitude.*

YOU CAN HEAR the murmur of engines in the distance. Looking down the runway, the sight steals your breath. A P-38 Lightning, the famous twin-tailed fighter of World War Two, stands on the centreline. Its propellers are turning. It's alive!

Behind it and off to the side, four P-51 Mustangs wait, their noses turned so the pilots can see down the runway. Behind them are a P-47 Thunderbolt, a P-40 Warhawk, and a P-63 Kingcobra. Nine propellers spin at idle, the sun glinting off the blades. Then the murmur becomes a hum as the Lightning starts to move. It

rotates just as it passes you. One at a time, the Mustangs kick their tails straight and follow. Four times, the smooth sound of a Packard-Merlin engine rises and falls as a P-51 flashes by. The P-47 lifts off in a three-point pose, the confident rattle of its R2800 radial a contrast to the music of the Merlins. Next comes the "Flying Tiger" P-40, and lastly the P-63 on its tricycle gear.

This could almost be England in 1944, or the South Pacific in 1945. But it's actually Chino, California in 1999. The event is the Planes of Fame Airshow, presented on the April 24th and 25th weekend by the museum of the same name. (It and other Chino attractions were described in the August issue of T&B, for anybody wasn't paying attention.) This is the first major airshow put on by Planes of Fame at its home field in a decade.

The museum is famous for its vintage military aircraft, so guess what the airshow features? Aircraft have come from Planes of Fame, from other air museums in Southern

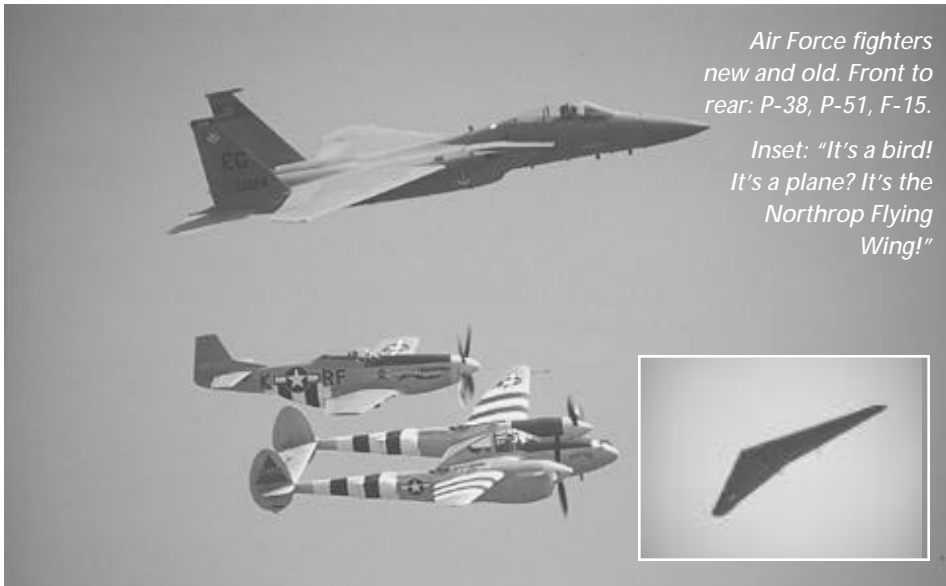
California, and from private owners up the West Coast as far as Boundary Bay (Jerry Janes's familiar Albatross being the single Canadian participant). Almost every significant American combat aircraft of the Second World War is represented in the sky, together with several Allied and Axis types. There are few interruptions by civilian aerobatic acts or military jet displays.

At three points in the show, the old warriors are displayed in groups with a common theme. The first is a "US Navy" flight. It is anchored by a flock of fighters: One Grumman FM-2 Wildcat, two stout F6F Hellcats, the mighty twin-engined F7F Tigercat, an F8F Bearcat, and two F4U Corsairs. Accompanying the fighters are a Douglas SBD-5 Dauntless dive bomber, its fuselage curves reminiscent of a 1930s sedan, and a plump Grumman TBM-3 Avenger torpedo bomber. The dark blue aircraft all launch from runway 04, breaking ground at show centre. Their flying is conservative — right-hand orbits of the field, always above 500 feet and below 250 knots — but it succeeds in showcasing the sight and sound of these historic planes.

The second group is the "Army Air Force" flight, made up entirely of fighters. The last event of the day is the "bomber" flight, composed of three B-25 Mitchells, an A-26 Invader, the Confederate Air Force's

A brace of Corsairs rumbles past the photographer





Air Force fighters new and old. Front to rear: P-38, P-51, F-15.

Inset: "It's a bird! It's a plane? It's the Northrop Flying Wing!"

B-17 and He.111 (the editor's favourites!), a DC-3, an Albatross amphibian, and a Lockheed Lodestar.

The show's format of several airplanes in the sky at once, grouped by theme, is something that other airshows should borrow. It puts the airplanes in a context and allows comparisons to be made between them. During the Navy flight, you can see how Grumman's "Cat" family of fighters evolved from the Wildcat to the Bearcat, in

a way no textbook could impress. (To expand the lesson, three replicas of the Wildcat's predecessor, the F3F biplane, fly past to open the show.) When the P-51 flies in the company of its Army fighter contemporaries, it becomes obvious why the Mustang was seen in its day as so clean and attractive.

In between the groups, several airplanes go up for individual performances. Even alone, they make their characteristics

evident. The Soviet Yak-3 — so small! The Mitsubishi A6M5 "Zero" — as delicate as origami in appearance, but can it turn! Look away for a second, and you will find it has changed direction in the sky, in an impossibly small amount of space. The Hawker Sea Fury — more than any other fighter of its era, it looks and flies like the embodiment of power. And the N9M scale prototype of the Northrop B-35 "Flying Wing" — how does it fly at all?

The climax of the show occurs immediately after the Army Air Force

flight. Some of the World War Two fighters land and taxi past the crowd, but a few do not. For the next act, a US Air Force F-15 jet roars aloft to put on its thunderous display. At the end, it does not land either. Instead, it approaches from the east, throttled back to stay in place behind the lead aircraft in a new formation. The other planes it flies with are the P-38, a P-51, and the P-63. Words cannot describe how impressive this group appears. The F-15 looks huge; the P-51 looks even prettier

Although packed with interesting planes, the Chino airshow is not large by Abbotsford standards. It's "just right"

than before; all four airplanes look purposeful.

There are many more details to tell of ... The "hot" ramp is open to the public prior to the show, allowing everybody to inspect the 30+ warbirds in attendance. Once the flying starts, the main warbird displays are interspersed with gaggles of Cessna Bird Dogs, Stearmans, T-6s (American Harvards, eh?), and 1950s jets. Solo pilots exhibit their aerobatic skills in an FM-2 and a T-6, as well as a more conventional Zlin. And there is the obligatory Stearman formation team, with three biplanes chugging through loops and rolls while the wing-walker in the lead airplane tries to collect on her life insurance policy.

Although packed with interesting planes, the Chino airshow is not large by Abbotsford standards. It's "just right," perfectly sized so that an enthusiast can see everything on the ground and in the sky. If the greatest airplanes of the 1940s are what interest you, you should attend. If you didn't this year, be reassured that Planes of Fame plans another show for April 29 and 30, 2000. Call the museum at (909) 597-3722, or check out their website at www.planesoffame.org, for details. **T&B**

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Classified Ads are free (within reason) to members. Display Ad rates are:

Business Card: \$25 per year

<i>1/4 page:</i>	<i>\$10/month</i>	<i>\$100/yr</i>
<i>1/2 page:</i>	<i>\$15/month</i>	<i>\$150/yr</i>
<i>1 page:</i>	<i>\$25/month</i>	<i>\$250/yr</i>

Ads that have been in for more than 6 months are subject to removal if space is required for other stuff. Please contact George the editor if you want it kept in.

FOR SALE: New 4130 Tubing - most sizes available. **Used** - Tripacer Fuselage (comes with logs), metal prop off 150 hp TRIPACER (comes with logs) Cessna spring steel gear legs, misc. wheels, axles, brakes and parts, misc. instruments (no altimeters!) A75 engine case, 7 Continental cylinders, some Lycoming cylinders (big), carbs, mags, pumps, old radios, etc. Call Pat at home, 533-1839.

WANTED: Medium size air compressor, with or without tank.

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Bob Cutting 275-1603

Email rcutting@direct.ca

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Vic Gabas (604) 853-2778

FOR SALE: SIROCCO PROJECT

Fuselage, canopy, tail group complete. Air frame control components done except for cable. Main-wheel gear, wheels and brakes done. Tail-spring and wheel included. Panel made, no instruments. Lycoming 0-290 GPU Zero-timed. Will Neubert stainless cross-over exhaust with stainless muffler/shrouds. Bendix PSC5 carb. Bendix mags with non-shielded leads. no starter, starter ring or alternator. Weldtech engine mount. McCauley prop.

Wings: ribs and minor spars done. Spar diaphragms done. Two spar-grade spruce

planks. No other wing parts.

\$15,000 firm, complete and not interested in parting-out

Jim Hunter 576-2678

FOR SALE:

1 set (8) 60810 (68763) M10 main bearings \$295 per set

1/2 set (4) of same \$150 per set

1 set (8) 60810 (68763) M003 main bearings \$295 per set

1 set (8) 61662 M10 Rod Bearings \$175 per set.

All bearings fit Lycoming 0-235 and 0-290 (without C/S prop). All are new, perfect but certs mislaid,

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FOR SALE:

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Roger Gauthier (Kelowna) (250)-763-1529
(250) 212-0832 (cel)

WANTED: PA 18 or PA 20/22 Wings. Some damage OK. 946-5881

FOR SALE: Tailwind Project. I hate to let it go! All wood for wings, spars and ribs done, new wing fittings, control system, Cougar

Classified continued on page 8

Classified Ads (Continued from page 7)

fuselage mostly modified for Tailwind use.

George Gregory 882-8016

FOR SALE: Mags, turn and bank indicator. Fuel tank with gauge, cut down Sensenich prop, lots of other stuff.

George Gregory 882-8016

FOR SALE: Fleet F7 Biplane replica. Very close to original copy except for uncowed engine. Engine: Kinner R55 160 hp. Aircraft is modified for solo operation from rear cockpit. Extra bellytank with wobble pump. Original Fleet wheels, brakes, pedals and stick column. Original parachute accommodating bucket seats, oversize tires, Stits covering, voice activated intercom. Ted Hendrickson Propeller, manual and extra key magswitch.

\$35,000 Canadian. (604) 478-6048

Will consider small antique aircraft engine as trade-in.

FOR SALE: Some Cont.0-200 parts: Case (checked, no cracks) Camshaft, Gears, Rods and Pistons; Carb and spider, Starter (pull type) and Generator, mags (one is disassembled). \$2500 for the package, offers considered on individual parts. Also, Prop hub for Cont. tapered shaft, \$350, Wing parts for Taylorcraft BC-12D (disassembled) including ribs, spars, compression struts, brace wires and strut fittings. Offers?

Contact David Smith (604) 513-0353
(604)513-0373 (fax)

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Value of work is \$6-8000 depending on condition of aircraft.

Kevin 580-6264

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Tim Novak 271-8586

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Stuart Gear (604) 941-9402

E-mail:sgear@infoserve.net

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1- remote compass

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11- circuit breakers (Klixon)

1- Electric fuel pump Weldon A8100-00

1- Fuel gauge and sender - Stewart Warner
Call GRANT (604) 536-6945

FOR SALE:

ELT: ACK E-01, meets TSO c91 - A, complete with external antenna kit and remote panel \$225.

David Clark Headsets \$225 (mostly 10-30 type, helicopter and airplane.

Telex PT-300 PTT \$30.

Full map GPS Garmin 195 - Nicad pack, Pacific NW map chip, PC/MAC computer cable kit, mounting bracket. \$1500 or \$1200 without map data chip.

Bendix RSA 10 ED1 Injector Body, no history, \$400. Woodward Prop Governor #210681, no history, \$400.

National 360 Parachute, blue with matching carry bag \$900

Christen 5 point aerobatic seat belt harness, with 2-point Military 3" belt \$350

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FOR SALE: 4130 Annealed Gauge Plate now in stock, .025 to .375. We will sell you the plate or laser cut the parts
Industrial Laser Cutting ltd.

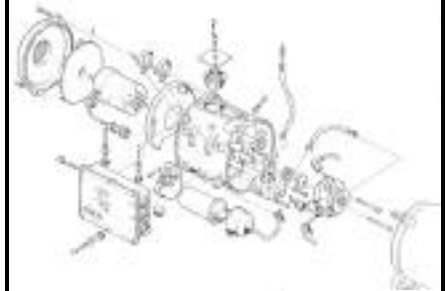
(604) 946-4152, Fax: (604) 946-4153

E-mail: tmw@industriallaser.com

FOR SALE: 1- Miller 200 amp AC/DC H.F. Tig/stick welding machine - 220V 1 ph. \$1200. 1- Miller 120 amp MIG (wire) welding machine, 110 volt. Portable sheet metal type, c/w gas kit (almost new) - \$800.

Pat O'Donnell 533-1839

Technical Illustration Gordon J. Hindle FSAI & Associates



13386 Marine Drive, White Rock,
British Columbia, Canada V4A 1G2
Tel/Tfx. (604) 535 0592
www.lynx.bc.ca/gordon

WHAT A SAD WAY TO END the last issue of 1999.

I am, of course, referring to the recent midair collision involving Stan Vivian, Alvin Shafer, Nigel Dodds and student Ben Hoben. Above all, condolences to the families of all involved. It is a small consolation that these all died pursuing a passion, a thing they deeply loved.

Whenever something like this happens, I tend to re-examine my own involvement. Would I do something different? Should I stop flying? And what of those unwitting people who venture aloft with me? I expose them to risk as well.

What *should* you do? Stop living? These people were living a dream, chasing their particular rainbows. If you stop doing that,



you're half dead already. If I shied away from things because I was afraid of what could go wrong, I would have never married or had a family or bought a house.

Investment advisors will tell you that no matter how you invest, you expose your wealth to risk of one sort or another. The more volatile an investment is, the greater potential reward *or* loss. The curious thing is that the "safer" investments, by virtue of their lower return, can have their earnings minimized or even eliminated by inflation

and taxes: another kind of risk. The safe way *isn't* always.

And so it is with life and dreams. We need to live large; to be passionate, alive, aware, not shying away from something because of what *might* happen. I have missed many opportunities because I was too cautious.

We are all diminished by this event. The accident is tragic beyond words, especially in the case of Ben Hoben, who was just beginning to live the dream, and of his instructor, Nigel Dodds, who I gather was a younger person. But all of them were *living* life, laughing, excited and involved in their dreams. I'd like to dedicate this last issue of the millennium to their memory, and to the spirit with which they approached life. **T&B**