WARM AIR 9 May 20

Aviation Sports Club Gliding Newsletter

THIS WEEKEND:	Club Cellphone 022 357 6731	***www.ascgliding.org***
Saturday	Instructing:	Bank Acct 38-9014-0625483-000
	Towing:	
	Duty Pilot	
Sunday	Instructing:	
	Towing:	
	Duty Pilot	

LEVEL THREE – STILL NO GLIDING
MEMBERS NEWS

WHAT ARE OUR MEMBERS DURING LOCKDOWN

Some of my readers are sending me stuff like this……thanks John Issott

Pilot in our road has been laid off
Asked him if he wanted to earn a few quid helping me with the decorating and he was really made up.
I took a chance as I wasn't sure if he was any good, but in fairness he made a great job of the Landing. 😉

NEW ZEALAND AVIATION NEWS – *the editor, John King writes*

Good afternoon all,

The May edition of *Aviation News* is out on schedule and, as far as we're able, fault-free and full of good stuff. As it's digital only, don't go looking in your letterbox but access the link:

http://www.aviationnews.co.nz/uploads/Products/product_253/001A_AVNEWS_0520.pdf

Some of you will have received this link via other means. The good news is that you won't be forced to read it multiple times, but please do savour it. Every word is hard won and the result of the sweat of somebody's brow, perhaps even more than usual in these uncertain times.

More good news: everybody is encouraged to disseminate this edition, to spread the word that *Aviation News* is alive and well. It might even encourage more people to read it regularly, so please pass on this link.

Speaking of uncertain times, we hope to have June back into a print version, but that's in the future and out of our immediate control.

PERSONAL PREPARATION

You've decided to enter a major competition, but where does one start with preparation? Naturally, the best place to start is with the pilot. The good thing about this, it can be done all the time.

For me, it's essential to realize that the focus should be put on

the process of what makes a good flight, the skills & factors necessary to achieve the performance. Focus on putting all the little bits together to make a great & fast flight, rather than "I just want to make a fast flight today". Forget the speed, it'll all just happen naturally.

Typically no pilot is better than another with hand-flying skills. While I've never flown with Kawa to compare, I'm sure I could equal him on hand flying skills alone, it's just that he makes better decisions than myself, you too. The really top pilots I think have mental toughness, good physical condition & a burning desire to achieve.

Endurance

Racing gliders is an endurance event, no question about it. Want to have a strong performance, not fade off & lose points near the end? Only a good standard of physical fitness will carry you through to the last days. The higher the standard you hold within yourself, the better chance you have.

Fatigue can be very subtle, it shows earliest as indecision leading to, you guessed it, poor decisions & lost points. If after some flights or competitions, you wonder at the strange or silly decisions you've made, you've probably been a victim of dehydration or low blood sugar - these are all under your control & preventable!

Physical Fitness

Physical fitness, stretching, nutrition, food for the flight, alcohol, sports additives, oxygen, cutting out smoking, mental preparation, recovery, coping with stress on the ground & in the air, goal making, knowing your strengths & weaknesses, analyzing individual flights, preparing the glider, are all in the package of making a top-flight - in my following articles, I hope to share with you these topics & how I prepare for top performance at a competition.

Physical fitness, the beginning...

Learn what level you're at first, the 12 minute Cooper test is a super-easy way to test your fitness level is against sex & age group. If you don't make at least the fair category, you'll want to do something about that, preferably get it into the good range at least!

You'll need to make a plan, stick to it for at least 3 months before you notice any real difference, the sooner you start, the better! Plus you get the added benefit of feeling better & knowing you're gaining points on your mates 🙂

In the next article, I'll talk about pre-flight routine & in-flight health, an important part of making good decisions, day in, day out!

Adam Woolley was born into the gliding world, being the 3rd generation in his family. Going solo at 15, his thirst for efficiency in soaring flight & quest for a world championship title to his name has never wavered. One big passion is sharing his experiences & joy with other glider pilots all around the world. Adam is an airline pilot in Japan on the B767 & spends his off time chasing summer around the globe. He has now won 7 national Championships & represented Australia at 5 WGC's & 1 EGC.

OLD GLIDING EBOOKS AND MAGAZINES *Grant Jefferies passed this to us:*

Found these on the Lakes Gliding Club in the UK's website....the first link contains about 30 free gliding ebooks, the second has hundreds of old British Gliding magazines in PDF format that you can download for free and read on your PC, phone or Kindle....good reading during the lockdown...

http://lakesgc.co.uk/mainwebpages/Wally%20Kahn%20Book%20Collection.htm

http://lakesgc.co.uk/mainwebpages/oldsandgmagazines.htm

2010: North Island Regional Championship: a student pilot's view. Jonathan Pote.

At Lionel Page's suggestion ("You'll enjoy it, and learn a lot") I headed for Matamata for the last few days of the northern Regional Championship's, expecting to see, and possibly assist, a stacked grid, but otherwise just enjoy a relaxed time watching some flying. Wrong!

The day's briefings were at 10:30. As I arrived on the Thursday, Steve Wallace was describing his previous day's flight, a day when so few completed the task that it was declared invalid as a competition day. Amazing (to me) technology allowed a 3D view of his flight (and all the others initially, but soon he was alone in the sky) as he harvested energy from thermals and a weak convergence on a poor day, successfully completing the task. David Hirst, 'Soaring NZ's very own meteorologist, gave a very detailed Met Brief (more technology to impress and confuse me) and it was his opinion that it was not a day for competition. Reluctantly, all agreed. David Todd headed off to Tauranga to buy an FK-9 as Auckland ASC's new tug, which seemed a bit of an overreaction just because gliding was off for the day! I helped re-rig a lot of gliders from the previous day's land-outs. Good experience, excellent company, and then a meal out that evening.

Friday showed more promise, but David Hirst's source of Met for the week was very hard to interpret, there being an effectively stationary anti-cyclone; minor variations of temperature and humidity had very significant effects on the resultant weather. The day was declared "On" and the grid formed up. Just a handful of people organised a rapid launch of nearly twenty gliders, in Club and Fast class, using three tugs. As it quietened down again, news of the first land-outs trickled in, so I left the launch point to see if I could accompany someone and assist. No chance: I was firmly handed a set of keys and sent off on my own. Joan had it all perfectly organised, including a large scale map showing exactly which paddock I had to find, some sixty kilometres away, by "The Swamp". This remnant of the Hauraki Plain swamp is famous for generating lift, but that day it was surrounded by land-outs. I found Adam without difficulty in quite a small paddock. Soon his Schleicher ASW 20L ZK-GDF was in its trailer and we were headed back for the mandatory beer. A lot of beers were bought that day; about a dozen landed out, so lots more practice at rigging followed.

That evening, Steve very kindly gave me an excellent tutorial on several aspects of thermal soaring and safe gliding distance. Almost as if by arrangement, David Hirst then came over and offered me the back seat in his Schempp-Hirth Duo Discus ZK-GDX the next day. He had intended to bring a single-seater as had everyone else, but sadly that had been damaged and his club had allowed him the Duo. It's an ill wind.... So Steve's brief was to be followed by 'the practical', a Master Class in fact.

Next day the forecast was better, and David suggested in his Met brief that whilst it would be hard work to the north, it would be easier to the south. The Contest Director came up with an AAT (Assigned Area Task) in which we would go 16 km north from the start gate to Waitoa, then 115 km south to Tihoi, beside Lake Taupo, 36 km north-east to Atiamuri, then home to Matamata for a total of 273 km. To somebody who struggles to get a twenty minute flight off the same 2000' tow height, it seemed daunting, but I was clearly in good hands.

Third on the grid of seventeen, David refused the offer of the Cub as we had one hundred kg of water in the wings and fin. The Pawnee had no problem however, and soon left us at 2000', the undercarriage coming up with a hefty pull and a satisfying clunk. As he had predicted, it was a skilful task gaining height but gradually he made the local cloud base at 3300' whilst the others were launched and we waited for 'the gate' to open (for fairness, no-one can set off across the start line until all are launched and settled down). After about thirty minutes, some of it spent with several gliders in the same thermal, the gate opened and we crossed the line, declaring a start. It was indeed a struggle to reach Waitoa, and even now most gliders seemed below us. Heading back southwards, David considered landing to have a 'relight' in the improving conditions, but carried on. As predicted, the cloud base rose, but so did the terrain which was at times a little hostile; David had asked me to keep an eye on possible paddocks along the way, as well as spotting other gliders circling in lift. Lake Rotorua was away to the east, and Lake Taupo gradually came into view from the south as we alternated between harvesting energy in thermals and running across the blue gaps. Time and again I saw how to centre on a thermal, and made my own assessment as to where to head next. Mostly I agreed with David, so found out the (sometimes inconvenient) truth. The very clever small screen on the instrument panel (more technology.....) initially announced that we had to make a net gain of 24 500' before commencing a final glide,

but steadily that reduced and the cloud base gradually rose to 6000' in the clearing sky. At times we were close to several steeply banked gliders (very useful conditioning for someone used to empty skies), at others following a couple and choosing the track of the more successful, at times strangely alone. David's style seemed to be one of playing safe; I rarely saw a glider above us, often saw one below. This has its drawbacks, 'though, as viewing horizontally from just below cloud base it is harder to assess where to go next unless you can remember the view as you entered the base of the thermal. From the ground it seems so easy!

After Tihoi success seemed assured, assisted by a predictable thermal, 'The Kinleith Thermal' over a wood pulp works. There are actually two thermals here; the one over the pulping plant smells nicer (but not 'Pine Fresh Fragrance', rather 'Wet Wood'), the one over the effluent ponds not only smells like, well, effluent, but is weaker. Soon the magic screen changed from minus to plus and the figure shown was now money in the bank. At about plus 300 feet, with the computer deliberately misfed information to compute as if we had squashed insects distorting the airfoil, it was time for the final glide from sixty km out. It would be a skillful (and brave!) person who could compute that without help, but even I could understand that screen. So 80 knots direct to Matamata, dumping the water a few kilometres short of the airfield, a 'Competition finish' pulling up into the downwind leg, wheel down with another loud clunk and a lovely landing after just over four hours airborne. Over the week, David was third in the Standard/15 meter class, Steve second.

A fantastic learning experience over three lovely days; I personally find I can learn a lot just by observing even when not actively involved, especially with those tasks such as reading the sky and thermalling where information has to be taken in and processed as well as skillfully acted on.

Thank you, the two Davids, Steve, and Lionel. I am in awe of your knowledge and skills, but you share them so readily.

Jonathan Pote, Auckland ASC.

AMPHIBIAN GLIDERS OF THE USMC ~ Jonathan Pote 2020

Before the Second World War, gliders were for sport only. Germany was a slight exception in that the nascent Luftwaffe realised the potential of sport gliders such as the Grunau Baby to produce excellent pilots at low cost whilst remaining within the letter if not spirit of the Versailles Treaty.

The dramatic success of the DFS 230 on May 10th 1940, when glider-borne troops captured the "Impregnable" Fort Eban-Emael plus two strategic bridges and opened the way for the German advance into Belgium, led all the combatant nations to think the glider was vital: A silent approach and pinpoint landing of organised soldiers was almost undefendable against. At Eban-Emael seventy-eight German glider troops neutralised over seven-hundred and fifty defenders within minutes, losing only six killed and twenty-one injured. The Belgian defenders, trapped underground, surrendered next day. Thus ten nations were spurred on to produce over fifty types of assault glider but many were just a single prototype and only nine types saw operational use (by Germany, Russia, the British and Americans). With the advent of the helicopter, gliders were obsolete overnight, with just a few training flights and wholesale scrapping after the war. Few survived even in museums, but many became garden sheds or chicken houses, some to be eventually rescued and restored.

The last known use of the CG-4A was in the early 1950s by the USAF with an Arctic detachment aiding scientific research. The CG-4As were used for getting personnel down to, and up from, floating ice floes, with the glider being towed out, released for landing, and then picked up later by the same type of aircraft, using the hook and line method developed during World War II. The only modification to the CG-4A was the fitting of wide skis in place of the landing gear for landing on the Arctic ice floes.

The United States Marine Corps

One of the most unlikely lines of wartime research was the amphibian assault gliders requested by the United States Marine Corps. Allied defeats early in the war were catastrophic. By the end of 1942, Germany held all of continental Europe (although Russia was beginning to fight back) as well as North Africa. In the Pacific, the Japanese held most of New Guinea and the Solomons and multiple islands in the western Pacific Ocean as

far as Wake Island, having been stopped at Midway Island. The American forces were under no illusions that the fight back would be easy: Many heavily garrisoned and fortified islands would have to be taken, at huge human cost.

Was there an alternative to the obvious (but almost suicidal) amphibious attack? There Marines are at sea in great discomfort for days before having to wade ashore from landing craft and fight their way across an open beach under murderous gunfire from pre-prepared defences above the high water mark. Why not arrive by glider, fresh from a distant established base, the pilots ending their 'landing run' at the high water mark, or even behind the beach defences? The no-doubt wrecked glider hulks would provide the invaders with some cover, and shelter for casualty dressing stations once the fighting moved a short way inland.

In May 1941 (before Pearl Harbor) the USMC's stated requirement was to put seven-hundred and fifty men (a battalion) and their equipment rapidly onto a beach, accepting there was no chance of using a glider for a second time. The gliders were to be towed by the wonderful Catalina (which still graces the skies today) whose two-thousand mile range allowed for a very distant objective. Whilst Armies were looking to larger gliders with more troops and even vehicles, the USMC very sensibly thought small, a dozen or less troops and personal equipment. Pacific beaches are not wide even at low tide and the landing should be up the beach, low water mark to high water mark. In addition, unusually, a low wing configuration was chosen, thus dispensing with wing-tip floats and their attendant drag. Some glider mounted machine guns made sense, more for use after landing than in the air. The final (one might say ridiculous) demand was for parachutists to be able to jump from the glider, although what options the pilot had in a now empty glider over a contested troop insertion is hard to say.

A word on designations: The US Navy and US Army were constantly at each other's throats, rarely agreeing let alone co-operating. Aircraft of the US Army (Later Army Air Corps, then Army Air force before final independence as the USAF) were simply designated. 'B' for bomber, 'C' for cargo, 'T' for trainer etc. Initially fighters were known as 'Persoot ships', hence 'P' until 1947. Each letter designation was followed after a hyphen by a sequential number. What could be easier or clearer?

Not so for the US Navy. Their plan was to use a letter unrelated to function, follow it with a second random letter to denote sub-function, then a third random letter to show the manufacturer. Variants were defined by a final number, and if the manufacturer survived this maze to make a second, distinct type, '2' was added IN FRONT of the manufacturer. Confused? I think that was the idea, but the US Navy fought its war with the TBF, TBM (both Grumman Avengers, one licence built), F4F (Grumman Wildcat, the first 'F' denoting 'fighter', the second 'F' Grumman, the '4' denoting fourth fighter design by Grumman) , PBY (Catalina) and so on. Confused? The Japanese must have been, but then their system was even worse.

Two designs followed a request for a twelve-troop glider, the Bristol XLRQ and the Allied Aviation XLRA. The 'X' indicates prototype (and probably by random chance also did for the USAAF)

The Bristol XLRQ-1

Bristol Aeronautical Corporation of Connecticut designed the XLPQ, a twelve troop, low wing, waterborne glider also with retractable undercarriage. Two prototypes flew, but the production order for one hundred was cancelled. By 1943, USMC glider assaults no longer seemed a good idea.

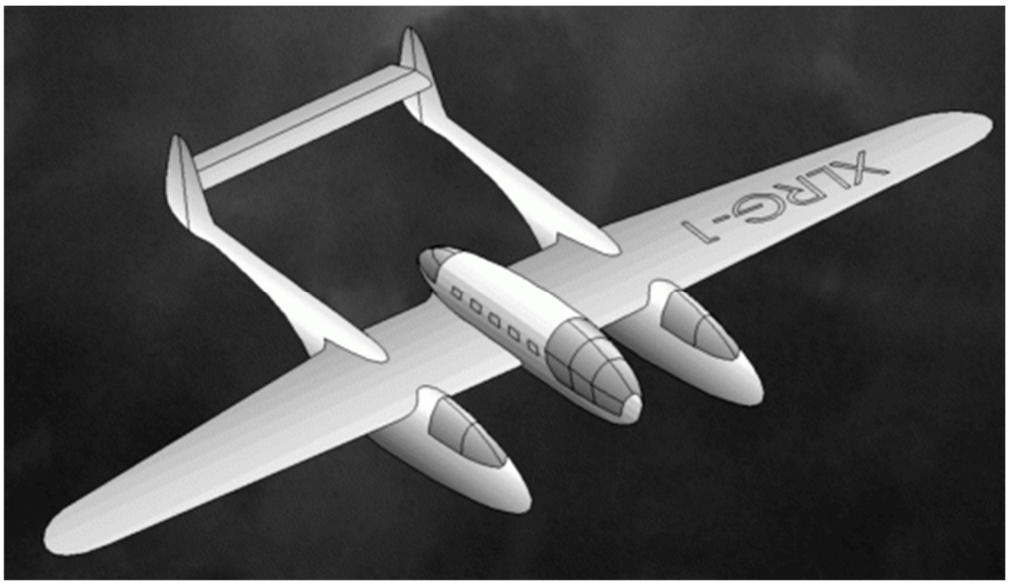
Bristol XLRQ-1 glider in 1943

The Allied Aviation XLRA-1

The second contender was the Allied Aviation XLRA. This was to the same specification, and again two prototypes were flown before the whole concept was abandoned. There is no data as to the performance of these assault gliders, but a guess would be a lift/drag ratio in the low teens, far less than the DFS 230s seventeen, and thus requiring the tugs to get closer to the defended beaches before release

The XLA-1 gets airborne

The AGA Aviation XLRG-1



The XLRG-1 designed by AGA Aviation was a step up: The centre pod would carry twelve troops, two being pilot-qualified. Five more squeezed into each pod. A small scale prototype was also ordered but little progress made before the program was cancelled. Confusingly, production gliders were to have be made by the Naval Aircraft Factory as LR2Ns.

The Naval Aircraft Factory XLRN-1

The AGA XLRG-1 was to be built as the L2RN as the Naval Aircraft Factory had already designed a large assault glider, the XLRN-1, and flown a prototype. This beast with a 110 foot wingspan (bigger than a Flying Fortress with its one-hundred and four feet span) could carry eighty equipped troops or a load of 3,000 gallons of petrol into a landing zone. As a third use, guided by radio control from the now-detached tug aircraft, it was hoped it could also be used to deliver a large amount of high explosive into the fairly vulnerable entrance of a U-Boat pen, only Barnes Wallis's earthquake bombs being able to penetrate the overlying metres of concrete. Little progress was made.

Thus the amphibious glider concept died after a short life, only a few prototypes built, but no lives lost.

ROSTER May/June 2020

Month	Date	Duty Pilot	Instructor	Towpilot	Notes
May	9	K BHASHYAM	L PAGE	P THORPE	
	10	G LEYLAND	R BURNS	F MCKENZIE	
	16	I O'KEEFE	R CARSWELL	D BELCHER	
	17	M MORAN	I WOODFIELD	F MCKENZIE	
	23	T O'ROURKE	A FLETCHER	A WILLIAMS	
	24	R BAGCHI	L PAGE	R CARSWELL	
Queens Birthday Weekend	30	T PRENTICE	P THORPE	R HEYNIKE	
	31	R WHITBY	S WALLACE	D BELCHER	
	1	I BURR	R BURNS	F MCKENZIE	
Jun	6	C DICKSON	I WOODFIELD	P THORPE	
	7	K JASICA	A FLETCHER	D BELCHER	
	13	J DICKSON	R CARSWELL	A WILLIAMS	
	14	B MOORE	L PAGE	R HEYNIKE	
	20	S HAY	P THORPE	R CARSWELL	
	21	K BHASHYAM	S WALLACE	F MCKENZIE	
	27	G LEYLAND	R BURNS	P THORPE	
	28	I O'KEEFE	I WOODFIELD	R HEYNIKE	