

WARM AIR 22 Aug 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

WE ARE STILL AT COVID LEVEL 3 THIS WEEKEND - NO FLYING.

MEMBERS NEWS

SATURDAY

COVID level 3 - no flying. Good looking day though

SUNDAY

Ditto

GNZ Training Presentation followed by Mid Winter Dinner -Sat 29th August @ 5pm @ Drury

This is the GNZ travelling road show presenting on the new soon to be introduced training system. We are welcome to attend.

GLIDERS OF WORLD WAR 2 VK7 *Russian and Japanese efforts: Jonathan Pote 2020*

The Soviet Union: The Gribovski G-11 and Antonov A-7

Russia had been the first to design a glider for transport rather than sport purposes. The G-63 was built in 1932 as a sole prototype but in 1941 Vladimir **Gribovski designed the G-11** to carry eleven troops or equivalent cargo. Perhaps five hundred or more were built before production ceased in 1948.



Gribovski G-11

Russian designers did not move away from sport glider outlines, not replacing the circular section fuselage with a box section, nor the finely tapered wings with utilitarian constant chord ones.

The Antonov design bureau was well established in the 1930s, and had produced a sport glider, the RF-7. Scaling this up produced the seven-seat **Antonov A-7** much as Germany had produced the DFS 230 from established sport gliders. The A-7 had the same drawbacks as the DFS 230, too small and complex to construct (but good aerodynamics). Some four hundred were built, some as tanker supply aircraft. One was trialled carrying a thousand litres of fuel for its tug, a twin engine bomber, as a way of greatly extending the range of the former. It was not used operationally.

Antonov A-7



Russia did not use gliders for assault purposes but rather for re-supply at night, flying into clandestine landing zones to re-supply partisans separated from main forces. Reinforcing troops could be flown in, or demolition squads could likewise be inserted behind enemy lines, with little or no plan for their recovery. Just one glider was recovered by a Tupolev SB twin-engine bomber from a rough strip using a ten-metre towrope. Aboard were two injured partisan senior commanders - even in Russia seniority has its privileges. On 21st September 1943, some thirty-five gliders of various types took some three hundred troops across the Dnepr River, a rare if not unique assault operation. Another vital tasking was to fly anti-freeze for Russian tanks into Stalingrad during the height of the siege.

Later Russian projects

Post 'The Great Patriotic War', the Soviet Union clung onto gliders the longest despite their limited use of them earlier. The Gribovski G-11 remained in production until 1948, when both the Yak-14 (thirty-five troops) and Ilyushin Il-32 (a massive sixty trooper) flew. The Soviet Union had become convinced of the heavy assault glider just as other nations abandoned the concept but it was to be a brief flirtation.

Ilyushin Il-32

The Ilyushin Il-32 was designed to carry a seven thousand kilogram payload, sixty equipped troops or a 122mm artillery piece and its towing vehicle for example. As such it came close to rivalling the GAL Hamilcar for capacity. For ease of production every line was straight, and most angles ninety degrees. It



was all metal (one lesson learnt in the harsh Russian climate) and full cross-section doors fore and aft allowed easy loading and rapid unloading (a second lesson learnt painfully). The undercarriage was fixed. However, the almost insoluble problem of a powerful enough tug aircraft raised its ugly head yet again despite the advances since the Hamilcar was designed. It was hoped to use the Tupolev Tu 75, a cargo derivative of the Tu-4 Bear bomber, itself a reverse-engineered copy of several USAAF Boeing B-29s that had landed intact in the eastern Soviet Union. However, the Tu-75 was canceled and all Tu-4 Bears were committed to the strategic bomber role. The empty Il-32 got airborne behind an Il-12 (roughly comparable to the C-47 Skytrain/Dakota, but with a tricycle undercarriage) and reached ten-thousand feet. The loaded Il-32 however required a more powerful tow and after a brief flirting with the German 'Troika schlepp' technique (in fact using two Ilyushin il-12s) the type was abandoned without production.

The Yakovlev Yak-14



Yakovlev Yak-14

The Yakovlev Yak-14 was designed contemporaneously to the Il-32, but to a more modest requirement to carry three thousand five hundred kilograms in the form of thirty-five infantrymen of the VDV (Vozdushnodesantnyye Voyska - airborne troops) or for example light artillery. The latter included a 57 mm assault gun, a self-propelled artillery weapon almost comparable to a light tank. As such it was very similar in performance to the Airspeed Horsa with some of the capability of a Hamilcar, but important lessons had been learnt. The size was optimum - the largest a twin engine tug could tow, thirty troops being a proven effective assault squad. The entire airframe was fabric over a duralumin structure for ease of build and

durability, square in cross-section for versatility and both nose and tail swung ninety degrees for easy loading and rapid unloading. A rear fuselage door sufficed for less stressful entry and egress. The two pilots sat in tandem in a raised and offset cockpit, causing minimal compromise to the cross-section of the load compartment, and they were provided with a display of the tugs relative position, thus easing the problem of cloud or night flying. Previous pilots had had to interpret the tow rope angle to maintain a suitable towing position in poor visibility although in all but the Hamilcar and Gigant the tow-rope was almost aligned with the pilot. Large slotted flaps and spoilers controlled and minimised the landing, whilst the fixed undercarriage could be deflated to lower the fuselage to the ground to unload cargo.

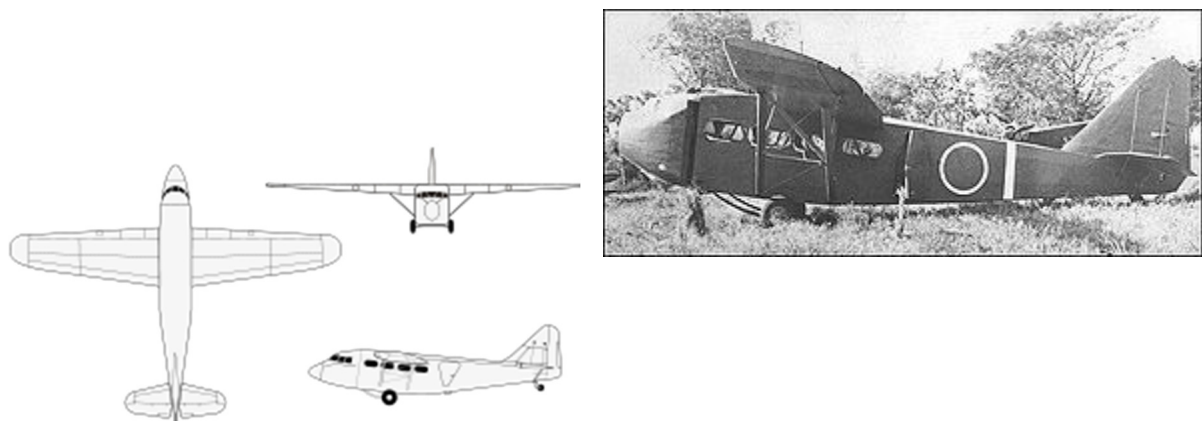
Over four hundred were built (some being supplied to Czechoslovakia) and were an important asset during their service, able to deliver heavy loads anywhere towed by the Ilyushin Il-12. In 1950 one was towed over the North Pole for dubious benefit, but in 1954 four Yak-14s towed bulk supplies including a bulldozer across the Soviet Union in four hops to Sakhalin Island (near Japan) before heading into the arctic to deliver their loads to a Russian Ice Station during a big freeze that interrupted other supply methods.

The Soviet Union maintained three glider infantry regiments until 1965, a twenty-five year interval compared to the five - ten years elsewhere.

Japanese gliders

Kokusai Ku-8

The Japanese also only used gliders for supply, not assault. The Kokusai Ku-8 was the only one of note, starting life as a light twin engine transport, the Ki-59 (Reporting name 'Theresa'). Not impressive in that role, simply removing the engines and associated systems produced a tolerable and cheap glider with an L/D ratio of sixteen. Later, minor redesign with a tubular steel framework fuselage and hinged nose produced improved the Ku8 II (Reporting name 'Goose' or 'Gander') which had a capacity of up to twenty troops compared to ten passengers in its powered progenitor, again showing the efficiency of gliders for load carrying. Some seven hundred were produced, and used mainly for re-supply in the Philippine Islands.



Kokusai Ku-8-II

The MXY8 Akigusa ('Autumn grass')

The MXY8 deserves a mention because of its radical nature, the fact that it flew successfully, and would have entered production had the war continued.

Japan was well aware that the massed daylight USAAF raids over Germany would soon be repeated over Japan using the B-29 Superfortress, and sought to pre-empt the threat by producing a version of the rocket powered Messerschmitt Me 163 Komet. Two pattern Me 163s were dispatched from Germany by submarine, but one submarine carrying much of the drawings was lost. Nevertheless, the Japanese engineers were able to reverse engineer the missing components and test-flew a powered copy. This crashed fatally on its first flight when the motor cut out soon after lift-off but their design was viable and only the nuclear weapons prevented further efforts.

As happened in Germany with the unpowered Me163A, Japan produced a glider training version which performed well and would have been produced in quantity had the war not ended.



MXY8 Akigusa

SOMETHING TO WATCH WHEN YOU CANNOT FLY

Why thermal in a slip?

<https://soaringeconomist.com/2020/06/20/why-thermal-in-a-slipand-the-hazards-of-skidding/>

GLIDING EVENTS CALENDAR 2020/21

Matamata Cross Country Course

-Sat 24th Oct 2020 - Wed 28th Oct 2020

Taupo Central Plateau (practice 31 Oct + 7 comp days 1 to 7 Nov)

-Sat 31st Oct 2020 - Sat 7th Nov 2020

Omarama South Island Regionals (TBC)

-Sat 14th Nov 2020 - Sat 21st Nov 2020

Matamata Northern Regionals

practice 28 Nov + 7 comp days 29 Nov to 5 Dec)

Springfield Soaring Championships

-Sat 28th Nov 2020 - Sat 5th Dec 2020

For further info see

<https://gliding.net.nz/events/?gnz=true&other=true&type=all&timerange=future&pageView=summary>

Matamata Air Cadet Camp

- 7th - 11th December 2020

Omarama YouthGlideNZ camp

-Thu 10th Dec 2020 - Sat 19th Dec 2020

Matamata Sailplane Grand Prix (4 comp days 27 to 30 Dec)

-Sun 27th Dec 2020 - Wed 30th Dec 2020

Omarama Nationals (practice day 01 Jan + 9 comp days 02 to 10 Jan inclusive)

-Fri 1st Jan 2021 - Sun 10th Jan 2021

Auckland Enterprise (practice day 16 Jan + 7 comp days 17 to 23 Jan inclusive)

-Sat 16th Jan 2021 - Sat 23rd Jan 2021 @ Drury

Matamata Club Class and MSC (practice day Fri 29 Jan + 9 comp days 30 Jan to 7 Feb)

-Fri 29th Jan 2021 - Sun 7th Feb 2021

Vintage Kiwi Rally @ Te Kuiti Camp Gliding New Zealand Te Kuiti

Sat 6th Feb 2021 - Sat 13th Feb 2021 Tow plane = Fox Bat LSA

(Waipukurau) Central Districts Regionals Competition Gliding Hawkes Bay & Waipukurau
Inc Waipukurau

Sat 20th Feb 2021 - Sat 27th Feb 2021

Printing Conventions: Any contribution will have the author's byline; Anything in Italics is either a byline or an editor comment; Tailpiece is the editorial.

Duty Roster Jul, Aug, Sep 20

Month	Date	Duty Pilot	Instructor	Tow Pilot	Notes
Aug	22	M MORAN	A FLETCHER	A WILLIAMS	
	23	T O'ROURKE	R CARSWELL	R HEYNIKE	
Aug	29	R BAGCHI	L PAGE	R CARSWELL	
	30	T PRENTICE	S WALLACE	P THORPE	
Sep	5	R WHITBY	P THORPE	D BELCHER	
	6	I BURR	R BURNS	F MCKENZIE	
Sep	12	C DICKSON	I WOODFIELD	A WILLIAMS	
	13	K JASICA	A FLETCHER	R HEYNIKE	
Sep	19	J DICKSON	R CARSWELL	P THORPE	
	20	B MOORE	L PAGE	D BELCHER	
Sep	26	S HAY	S WALLACE	R CARSWELL	
	27	K BHASHYAM	R BURNS	F MCKENZIE	