

- March 2023 -



The iconic F-22 Raptor is one of the best air superiority fighters of all time. Wouldn't it be great if we had a chance to own and fly one of these incredible aircraft. Well, it may be possible to build and fly a scale version of this aircraft that is powered by a Rotax 912 series engine and pusher prop. The scaled down version is known as the Archon SF-1, now available from Fisher Flying Products here in Southern Ontario and its bigger brother, the SF-2 should be available later this year.

President's Message

I have updated the KWRAA events calendar on the last page of the newsletter to reflect the confirmed fly-in information for 2023. Thanks again to KWRAA Director Mac McCulloch for setting these up and our members and friends who own airstrips where the fly-ins are held. Without your kindness, friendship and contribution to recreational aviation, KWRAA wouldn't be the best and most active RAA chapter in the universe.

This month's issue contains an interesting article by Terry Little. Terry is working on the restoration of a unique $\frac{3}{4}$ scale version of an iconic WW2 STOL aircraft. I think you will enjoy his article.

As you likely guessed from the photo above, there is also an article on the F22-like or maybe F35-like Archon SF-1 and SF-2. For anyone looking to build an interesting and eye-catching amateur-built aircraft that will draw attention everywhere you go, you should at least consider building one of these kits.

I am always looking for your input, whether it's a tip for other builders, a technical review of a product, maintenance on your plane, an article on flying or maybe a travel story involving your plane. Full-length stories related to your amateur-built aircraft project are especially welcome. 😊

2023 is going to be a great year for KWRAA!

- Dan

With a Moderate Headwind, “This Aircraft is Able to Take Off and Land in Twice its Own Length”

I do not profess to be a writer so this is a departure from the norm for me. Please be kind as you read through this, my first article.

Like many of the folks in our RAA chapter I tend to believe that there is not much I cannot accomplish with a little ambition, lots of learning and support from like minded people. I like to think we are overachievers as it is a rare feat to build and fly an airworthy aircraft. We are the 1% and my hat is off to each of you who have completed and or are on your way to completing your dream airplane. The following is an introduction to my newest project, I hope you find it interesting.

About ten years ago I purchased a partially completed, scratch built Sonex. It took me an additional 5 years to finish it and at the same time get my pilot's license. That 5 years introduced me to the mindset and skills necessary to build and assemble an aluminum airplane. I love the performance of the Sonex but had recently found myself thinking about a more “off airport” experience ... think STOL.

Last year I came across an ad in the RAA Recreational Flyer magazine for what arguably could be called the granddaddy of STOL aircraft. You guessed it, a Storch; or more accurately a 3/4 scale version of the Storch known as the Slepcev Storch. If you don't know what a Storch is you are not alone.



The photo above is a (full size) restored Fieseler FI-156 Storch. Originally designed for the Luftwaffe in 1935 and flown for the first time in 1936. The plane was used extensively through WW2 on all fronts. Besides being a stellar spotter plane and a favourite of Rommel during his desert campaign, its primary claim to fame was that it rescued Mussolini from a mountain top prison. If interested there are a number of articles about the Storch history on the internet.

My 3/4 scale Storch (SS4) was designed by Yugoslavian-Australian Nestor Slepcev. Originally manufactured by Slepcev Aircraft Industry of Australia, it later moved to Serbia, but is no longer in production. It is a close replica of the original design with similar flight characteristics. It is not a pretty airplane but its STOL capabilities and off field functionality are legendary.

Specifications;

- Wingspan: 10 m (32 ft 8 in)
- Length: 6.8 m (22 ft 3 in)
- Height: 2.28 m (7 ft 5 in)
- Wing area: 16 m² (172.2 sq ft)
- Max speed: 157 km/h (98 mph)
- Cruising speed: 130 km/h (81 mph)
- Stalling speed: 35 km/h (22 mph)
- Rate of climb: 183 m/min (600 ft/min)
- Take-off and landing run: 15 to 30 m (50 to 100 ft)
- Service ceiling: 4,572 m (15,000 ft)
- Range: 402 km (250 miles)
- Fuel capacity: 75 litres (16.48 Imp gals)
- Empty weight: 346 kg (763 lb)
- Loaded weight: 550 kg (1,212 lb)

If you are interested in seeing the Storch in action, take a look at this u-tube video. Although 20+ years old and a little grainy it shows Nestor Slepcev (designer) putting the 3/4 scale Storch through its paces.

<https://www.youtube.com/watch?v=8QgfPxmIpKg>

With a moderate headwind this aircraft is “able to take off and land in twice its own length”. I am looking forward to further developing my slow flight skills in this aircraft. My new mantra, “Low and slow is the way to go”!

There are a couple hundred flying examples of these aircraft located primarily in Australia and Italy but there are only 3 of these aircraft in Canada. Of the two flying examples, one is in St. Thomas and the other in Dawson Creek. The third one is in my basement. My kit was imported into Canada from Serbia 21 years ago and remained untouched until I purchased it last year.



This version of the Storch has all metal wings with the fuselage and tail-feathers fabric covered. I have not done fabric before and am looking forward to developing some new skills. I will post another article on the learning curve for fabric covering when I get there.

It is my intention to make the exterior as “period correct” as is possible, including full camo and the Bavarian Cross (less the swastika). A Rotax 912ULS (100hp) will provide power to a 74” two blade wooden propeller that I am planning on building with the assistance of Mike Shave. The interior will more than likely be digital (i-Pad) with steam gauge backups.

I am about 6 months into the build which has resulted in;

- the air-frame has been stripped and painted

- the aileron and flap frames have been assembled
- the wing skeletons are riveted together
- the wings are currently being skinned



The kit manufacturer was originally located in Australia and moved his business to Serbia for economic reasons. Unfortunately, I think I got the first one out of Serbia as it is missing many parts which I have to fabricate. It's not that big of a deal, except for the fact that the plans are poor with very few images. This is where I have to give a shout out to RAA members Mike Shave and Mac McCulloch who are able to share their experience and assistance to this project. As I progress through the build, don't be surprised if I reach out to some of you for your thoughts on various topics.

We have some tremendous examples of amateur-built aircraft as can be seen at our KWRAA fly-ins. The RAA provides a forum where a unique group of individuals can share their passion for building and flying. Everyone has a story about how they got started in the home-built aircraft business and I encourage you to share your stories, your experiences, your knowledge, and your building tips. Please be an active part of the RAA and support our executive in keeping the KWRAA chapter as an example others can aspire to.

- Terry Little

Want a Personal Fighter-style Aircraft?

Fisher Flying Products of Dorchester Ontario recently bought the rights to the Greek-designed Archon SF-1 all metal fighter-style aircraft.

The single seat SF-1 Archon has a striking visual similarity to an F22 Raptor or F35.



Originally designed to operate using a Rotax 503 with 50-65 hp., the SF-1 has an empty weight of roughly 445 lb. The very first engine used for testing only developed 45 hp yet achieved 100-mph cruise speed. With a Rotax 503, wing loading was less than 4 lb./sf! Google “Archon SF-1” for videos.

Dave Hertner, president of Fisher Flying Products and a member of the St. Thomas/London RAA chapter is currently developing a tandem two seat version due to customer demand. It will likely retain its current nickname the SF-2.

After spending 3 months of 70-hour weeks, Dave has successfully developed a mount for the Rotax 912iS (100 hp) installation and greatly improved the builder documentation of the SF-1 and SF2 kits. The Rotax 912 series engines can be easily installed in the SF-1 or SF-2 and be ready to be flown, following the required MDRA inspections.

The Archon SF-2 is somewhat longer than the SF-1, yet much of the structure, which has been strengthened, will be the same. It will be sold as a quick-build kit only and registered as Experimental Amateur Built. Dave is currently transposing the 2D drawings into a CAD format that can be used to pre-punch the aluminum components to make the SF-2 kit very quick to assemble for the new home builder. The quick build kit will meet the 51% rule for amateur-built aircraft.

Empty weight of the SF-2 equipped with a Rotax 912 series engine is expected to be about 600 lbs., with the cruise speed in the range of 140 to 160 mph and a climb rate of about 1000 fpm.

The SF-1 and SF-2 employ airfoil-shaped bottom and side surfaces inside the simulated “air intakes” that produce considerable lift. Additionally, because of the lifting force produced by the diagonal wing supports in a bank, no dihedral is required on the main (top) wing, yet the airframe is very stable.

The retractable wheels on the SF-1 remain just slightly below the bottom in case of forced landing. The initial production models of the SF-2 will have retractable gear. Dave is investigating how to meet the LSA aircraft rules in the USA.



Dave can be reached at: 1(519) 933-2055 or sales@fisherflying.com.

Dave’s website is www.fisherflying.com.

Upcoming Events in 2023: (Highlighted lines are KWRAA Events*)

January 12	-	January Meeting at 7:30 in the Cadet building at CYKF
February 9	-	February Meeting at 7:30 in the Cadet building at CYKF
March 9	-	March Meeting at 7:30 in the Cadet building at CYKF
Mar 28–Apr 2	-	Sun-n-Fun 2023
April 13	-	April Meeting at 7:30 in the Cadet building at CYKF
May 11	-	May Meeting at 7:30 in the Cadet building at CYKF
June 3	-	KWRAA Fly-in at Tom Shupe's (Mount Forest)
July 8	-	KWRAA Fly-in at Largo Woods - CLW6 (Winterbourne)
July 24-July 30	-	Oshkosh Air Venture 2023
Aug 5	-	KWRAA Fly-in at Juergensen Field (Arthur)
August 18-20	-	UPAC Convention 2023
Aug 26	-	KWRAA Fly-in at Largo Woods - CLW6 (Winterbourne)
Sept 2	-	KWRAA Fly-in at Deming Field – CDF6 (Damascus)
September 14	-	September Meeting at 7:30 in the Cadet building at CYKF
October 12	-	October Meeting at 7:30 in the Cadet building at CYKF
November 9	-	November Meeting at 7:30 in the Cadet building at CYKF
November 24	-	KWRAA Christmas Party – Details to follow later in 2023

* KWRAA events are fly-in and/or drive-in.

KWRAA Executive Contact Information:

Due to an increase in spam emails, please reach out to me directly for the latest contact information for the KWRAA Executive members. Thank you, Dan Oldridge (519) 651-0651.