

Zura

Turning cartwheels in the sky

Very few pilots have aerobatic manoeuvres named after them — but one who did was legendary test pilot Janusz Zurakowski, whose “Zurabatic Cartwheel” captured the public imagination in the 1950s. “Zura”, now 87, lives in retirement in Canada, where **JOHN PAINTER** visited him to research this major three-part biography for

HE CAME EASILY down the steps in front of his home, his movements more akin to those of a man of 47 than one of 87. The slight build, the clear eyes and the direct, almost piercing look were just as I had always remembered. His family and Polish friends use his full Christian name, Janusz, and other friends call him Jan, also with a soft J, but legendary test pilot Janusz Zurakowski is known as “Zura” by virtually everyone else in the world of aviation.

As we met and shook hands he said to me: “It has been a long time, John”.

“It certainly has,” I agreed, “all of 45 years.” We had worked together for a brief period all those years ago; a routine assignment for him but one which, for me, was both unusual and never to be forgotten.

In the intervening years I had read much about him. I had witnessed some of his later accomplishments, and had been very aware of many others. I knew, too, of his still-growing recognition, of the awards being made to him and of his retirement almost into a state of seclusion. But I knew there was much more to



TOP Fireworks: after watching Zura’s cartwheel manoeuvre at Farnborough in 1951, *Aeroplane* cartoonist Wren wondered whether “perhaps next time he’ll shoot off his war stores”. Zura used the weight of tip-tanks and rockets to provide extra lateral inertia and help spin his Gloster Meteor.

LEFT Zura about to climb aboard an Avro Canada CF-100 in the early Fifties.

OPPOSITE A portrait of Zura taken especially for this *Aeroplane* feature by **GERRY GARDINER** in June 2001.



ABOVE Having served in the Polish Air Force from 1934 until late 1939, Zura was already an accomplished fighter pilot by the time he came to England — but he had had to leave his logbook in Poland, and his first check-flight from British soil was in a de Havilland Tiger Moth belonging to an Army Co-operation unit at Old Sarum. This delightful portrait of uncamouflaged RAF Tiger L6923 was taken above cloud over Hatfield in October 1937.

BELOW In Poland Zura had flown PZL P.7 and P.11 fighters — these P.11Cs are from No 112 Eskadra, Polish Air Force.



learn about this quiet man who is considered in the aviation industry and by many of his peers to be one of the best test pilots, and certainly the best aerobatic pilot, the business has known. When we met at his home in Ontario, Canada, in early November 2000, I had the opportunity to ask him all the questions to which I had wanted answers for many years.

Jan Zurakowski sometimes uses a particular phrase when he speaks of his experiences. "If you want to understand the situation," he says, "you have to know the background." I found that there was much background to learn in order fully to understand and appreciate this talented test pilot.

He was born on September 12, 1914, in Ryzawka, Russia, of Polish parents. His father was a doctor. When Jan was seven, and after the civil war in Russia had ended with the victory of the Bolshevik Revolution, the Zurakowski family emigrated to Poland with their few belongings, moving slowly by horse and cart, always at night and in arduous conditions. Once they were settled in Poland, Jan went on with his schooling. In high school at the age of 15 he won a prize in a model aircraft

flying competition. The prize was a flight in a real aeroplane at the Lubin Flying Club, and from that moment on he was hooked. But at his age he was restricted to flying gliders.

It was 1934 before he was able to complete his matriculation and join the Polish Air Force as a cadet at the Officers' School in Deblin. There he learned to fly in 1935. Two years later he was commissioned and posted to 161 Sqn of the Polish Air Force, a fighter unit, in Lvov. His love of flying continued to grow and he spent much of his spare time, including leaves, flying gliders, even at night! On one such flight he suffered one of the few accidents in his flying career when he hit a tree with a glider's wingtip, fortunately damaging himself much less than the glider. "It was a moonless night," says Jan, by way of explanation.

In March 1939 Jan was posted to the Central Flying School in Deblin as an instructor. There he flew the gull-winged PZL P.7 fighter, a design that originated in 1931. At that time, as an all-metal monoplane, it was far ahead of the designs in many other countries, where most aircraft were still fabric covered. Although the P.7 was gradually developed into a more powerful and better-armed version, the P.11 (which, with its four machine-guns and a top speed of 242 m.p.h., became the standard fighter of the Polish Air Force), some of the early P.7s were still being flown.

In talking about this critical time in Poland's aviation history, Jan says that the country did not have the resources to develop better aircraft and train badly-needed pilots at the same time. Both would be needed when war broke out, and that was expected to happen in 1940. So the decision was made to concentrate on pilot training and then to buy aircraft overseas when the need for them arose. Events, of course, moved much more swiftly than the

Jan went to Romania, where a shipment of aircraft from Britain was due to arrive. Then Russia attacked Poland from the east: with war now on two fronts, Polish resistance collapsed rapidly. Jan could not go home

Polish government anticipated, and resulted in attempts being made, unsuccessfully, to buy aircraft quickly from the USA and France. Britain eventually came to the country's aid with the offer of a batch of 100 Fairey Battle bombers and six Hawker Hurricane fighters. It was intended that they would be delivered by sea to a Romanian port.

On September 1, 1939, Germany began an assault on Poland with 1.8 million troops on three fronts; from East Prussia in the north, Germany in the west and Slovakia in the south. The Luftwaffe assigned about two-thirds of its total strength to the invasion, including some 1,000 bombers and 500 fighters. Against this force the Poles had 392 aircraft, of which only 158 were fighters, most of them P.11s. Numerically, the odds against the defenders were bad enough; performance-wise they were catastrophic, the Polish fighters being no match for Messerschmitt Bf 109s with a top speed of 354 m.p.h.

It says much for the bravery and tenacity of the Polish pilots that they shot down 126 enemy aircraft during the 17 days of the initial attack. On the second day of the invasion Jan Zurakowski found himself in action against seven Dornier Do 17 bombers which attacked Deblin airfield. He dived his P.7 at one of them, firing his two 7.7mm machine-guns, but the guns jammed. As he tried to clear them the much faster bombers just played with him before they flew away into the distance. But Jan was elated to see one Dornier trailing smoke as it entered a cloud.

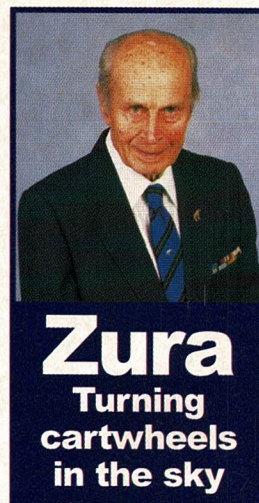
He says that the Polish Air Force's ammunition was old and not really compatible with aircraft armament. The breech blocks of the P.7's machine-guns came back into the cockpit, on either side of the pilot. Stoppages, which were frequent, had to be cleared by hand while the aircraft was controlled as best as possible, and this produced an erratic flightpath, "probably confusing to the enemy", says Jan with a grin.

The supply of fuel and ammunition for the aircraft was controlled not by the Polish Air Force but by the army, and priorities were often not properly considered. This situation did little to help the pilots' morale, but in retrospect Jan feels it probably saved many of their lives. Most of them were already considering means of continuing the battle from other countries, whereas, if fuel and ammunition supplies had been more assured, they would probably have stayed and tried to fight on until the end despite the overwhelming odds.

A few days later, Jan and some of his fellow instructors was told that they were to go to Romania, where the shipment of aircraft from Britain was supposedly due to arrive. On September 15, as preparations for the move took place, Warsaw was surrounded and two days later Russia attacked Poland from the east. With war now on two fronts, Polish resistance collapsed rapidly. At the same time pressure

was brought to bear by the German ambassador to Romania to prevent that country receiving the British aircraft, and the ship carrying them was diverted elsewhere. Jan and the other Polish pilots, who were now in Romania, were in difficult circumstances. They could not go home, and they wanted to carry on the fight against their enemies. But from where?

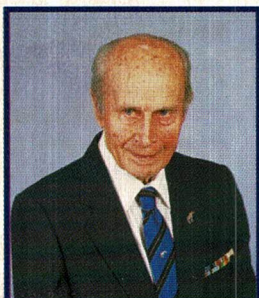
Through the final weeks of 1939 Janusz Zurakowski was homeless and on the move for the second time in his life. He had very little with him, not even his logbook, which he had had to leave in Poland, where his family also remained. In such a fluid state of affairs no-one wanted any possessions that would identify them as a Polish officer, and a flyer at that. Jan says he obtained papers stating that he was a forestry engineer. He finally gained passage on an old ship out of a Romanian port, bound for Syria. Most of the passengers were European Jews heading for Palestine. It was no luxury cruise, and he was profoundly thankful to arrive safely at the eastern end of the Mediterranean, and a different world. The French, who had a mandate over Syria given to them by the League of Nations in 1922, were not very popular there, but Jan and those of his



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BELOW Zura arrived in Britain in the lull before the Battle of Britain began. Here Spitfire Mk Is of 611 Sqn perform a "playful shoot-up" for the benefit of *Flight's* photographer. Zura would serve with another Auxiliary squadron, 609, from early October 1940.





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Zura gained his first victory when he shot down a Messerschmitt Bf 110 over the Isle of Wight. On August 24, 1940, he was forced to bale out of Spitfire I N3239 after being attacked by a Bf 109

compatriots with him found them helpful in giving the Polish flyers assistance to reach France, their ultimate goal. Early in 1940 Jan found himself at sea once again, this time sailing westward in the Mediterranean in conditions that seemed luxurious compared with his earlier voyage.

In France, Zura was one of a large group of Polish Air Force personnel who had found their way to that country. It was decided that about 1,000 of them would stay in France to form Polish units there, the remainder being sent to England. Initially there was considerable reluctance in Britain to use Polish pilots for operational duties. However, the deteriorating military situation, coupled with pressure from the Polish government-in-exile, caused that stance to be modified, and in August 1940 it was agreed that four bomber and two fighter squadrons would be formed as all-Polish units but under British command.

Jan was in the group earmarked for England, and on his arrival there, which preceded the decision to form the Polish units, he was inducted into the RAF Volunteer Reserve at Eastchurch. This took place during the relatively quiet period preceding the Battle of Britain, and it took a little while for the new arrivals to be fitted into the flying training programmes. "There was a great shortage of training facilities and instructors at that time," says Jan, "and in the end I was sent to an army co-operation unit at Old Sarum, near Salisbury."

His first flight there, in a de Havilland Tiger Moth, was made by accident. He did not realise, he claims, that the throttle control operated in the reverse direction to that in the aircraft he was used to flying, and as he taxied out on the grass airfield he thought he was retarding the throttle, but suddenly found himself airborne with the engine at full power. I had heard that sort of Zurakowski story told for effect before: he always knew exactly what he was doing!

Having proved that he could fly, Zura was given a check flight in a Hawker Hector with dual controls. Communication between the two cockpits was through earpieces connected by Gosport tubes. They took off and climbed and, having gained some height, the instructor

said something to Jan over the intercom. So he took over the controls, flew around and landed. "That was fine," said the instructor, "but you climbed too steeply after take-off." Jan laughs. "I hadn't even touched the controls at that point", he says.

His next move was to an Operational Training Unit (OTU), where he flew Miles Masters. He thought the nice, wide undercarriage was not very good training for the narrow-track undercarriage of the Spitfire, which was to be his next mount, as he found out when he was posted at the beginning of August as a Pilot Officer to 234 Sqn, an operational unit based at St Eval, Cornwall. At that time two Polish pilots were being posted to each RAF fighter squadron. He was sent on a familiarisation flight in the local area and, having looked around, decided to try some aerobatics. After he landed he found himself "on the carpet". No-one, he was told, was permitted to perform aerobatics in a Spitfire until he had at least 50hr on type, and then only with the written permission of not just the Squadron Commander, but the Station Commander!

The Battle of Britain started, according to official RAF reckoning, on July 10, 1940. As part of 10 Group, 234 Sqn moved from St Eval to Middle Wallop to get closer to the encounters with the Luftwaffe in the skies over southern England. Zura found the action thick and fast, and gained his first victory when he shot down a Messerschmitt Bf 110 over the Isle of Wight. On August 24 he was forced to bale out of Spitfire I N3239 after being attacked by a Bf 109. He made a safe parachute descent. He says that a part of the incident he remembers very clearly is the way the local policeman who arrived on the scene first took him to several houses to show him off, and each housewife insisted he have a cup of tea. "I was nearly awash in liquid after the third house," Jan recalls.

Late in the day on September 5 he evened the score with the Bf 109s by shooting one down into the Channel. Another fell to his guns the next day, though his own aircraft, Spitfire N2379, was damaged in the encounter and as a result overturned on landing. Fortunately, once again, Jan was not hurt. His

RIGHT Polish pilots of No 303 Warsaw-Kosciuszko Sqn, one of the highest-scoring units in Fighter Command in the Battle of Britain, enact a scramble to their aircraft to mark the anniversary of the squadron's formation in Britain on July 22, 1940.





LEFT In June 1942 Zura took command of No 316 *Warszawski* Sqn, based at Heston with Spitfire Mk VBs. One of the unit's Spitfires, BL479/SZ-X, is seen here up from its previous base at Northolt in early 1942.

last victory, a probable, was over another Bf 110 south of Exmouth on September 28, as the Battle of Britain began to wind down in intensity. This encounter occurred after the squadron had been moved from Middle Wallop back to St Eval for a badly-needed rest.

Zura says that 234 Sqn lost nine of its original pilots during the days at Middle Wallop and working in the Portsmouth—Southampton sector, leaving only ten, including himself. He seems particularly bitter about the deaths of some of his comrades which, in his opinion, were due largely to them being required to use fighter tactics, such as line-astern attacks and "vic" formations, that were long outdated and made them easy prey to the Luftwaffe's much more advanced techniques.

Back at St Eval, Jan was unhappy that he now had little opportunity to continue the fight against the nation that had invaded his homeland, and he asked for a move to a unit still involved in fighting. His wish was granted, and on October 6, 1940, he transferred to 609 Sqn, another 10 Group unit, which meant a return to RAF Middle Wallop and later, a move with the squadron to Biggin Hill. The Battle officially ended on October 31, 1940. His personal efforts in the fight were recognised in February 1941 by the award to him of his country's Cross of Valour and Bar.

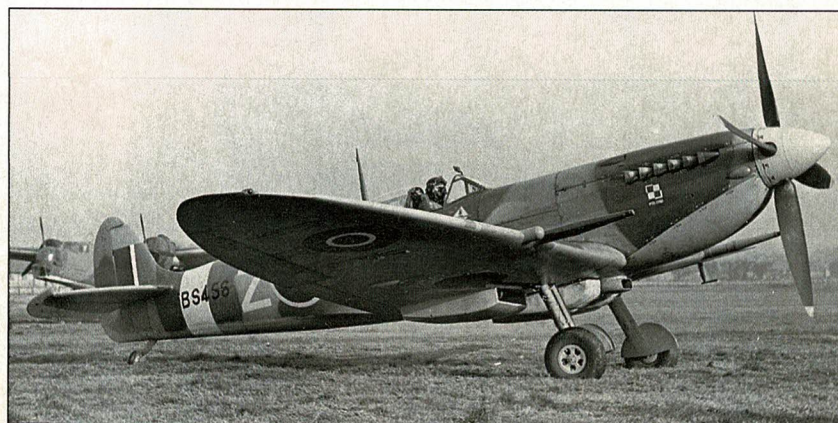
Before leaving the Battle of Britain era, it seems appropriate to attempt to summarise the immense contribution made to the victory by Zura and the other Polish flyers. One of the most vividly worded appreciations came from none other than Air Chief Marshal Sir Hugh Dowding, Commander-in-Chief of RAF Fighter Command, who said: "Had it not been for the magnificent material contributed by the Polish squadrons and their unsurpassed gallantry, I hesitate to say that the outcome of the battle would have been the same". These words assume even greater importance when it is remembered that Dowding was among those who initially opposed the formation of Polish units. The statistics of that contribution vary a little according to source, but the differences are not great. They show that one in every eight pilots involved in the Battle was Polish, and that they scored 201 victories. Of these, 125 in five weeks were to the credit of 303 Polish-Kosciuszko Sqn, making it the highest-scoring Hurricane unit in Fighter Command.

Sixteen Polish pilots were killed and several others seriously wounded or injured. A memorial to those who died stands today at Northolt, the airfield from which many of them operated.

In the next phases of his RAF career, Jan Zurakowski gained an increasingly wide range of experience and the opportunity to pass on to other pilots many of the lessons he had so painfully learned. In March 1941 he was posted as a flying instructor to 57 OTU at Hawarden, and then to 61 and 58 OTUs. His instructional work continued until the end of the year, when, on December 8, he moved to 315 Polish-Deblinski Sqn at Northolt, flying Spitfire IIs. There he was able to operate entirely with his own countrymen for the first time. In April 1942 he moved again when he was promoted flight lieutenant and posted as a flight commander to 306 Polish-Torunski Sqn at Church Fenton. There he flew Spitfire VBs. Promotion came again in June of that year, when he was made a squadron leader and moved to take command of 316 Polish-Warszawski Sqn. January 1943 saw him moved back to Northolt as Section Gunnery Officer, a position in which he took part in several fighter sweeps across France to keep his hand in and find out what was really going on.

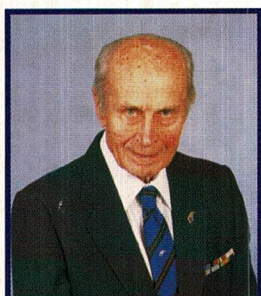
Probably the most important move in Zura's Service career occurred when he was promoted to Deputy Wing Leader of the Polish No 1 Fighter Wing, also based at Northolt. Much of the Wing's work was to escort US Army Air Force bombers on daylight raids into Germany, but it also entailed making fighter sweeps over the Continent. Zura led the Wing on 46 operational sorties. On October 30, 1943, he was

BELOW Before taking over 316 Sqn Zura had flown as a flight commander with 306 *Torunski* Sqn, which in September 1942 began receiving Spitfire IXs including BS456, seen here.



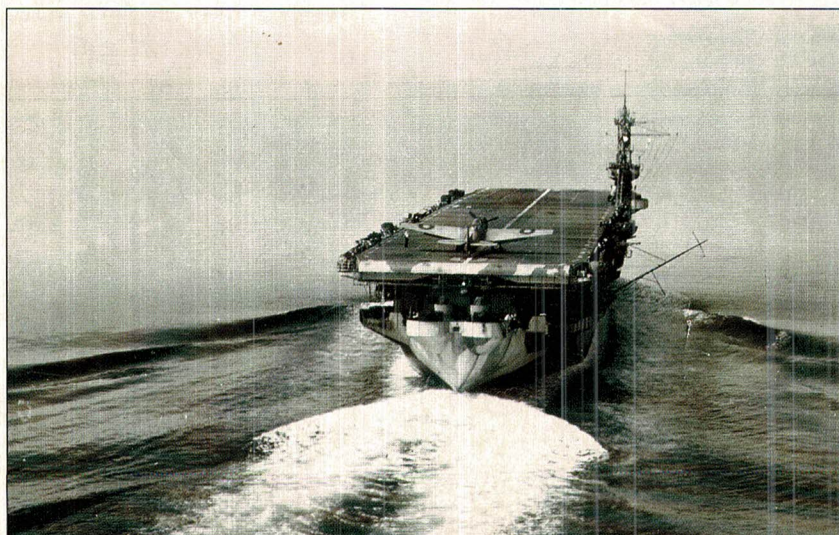


ABOVE A dramatic shot of a Seafire about to take the wire on *HMS Ravager* in February 1944. Zura joined this American-built ship in late November 1945.



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BELOW A stern view of *Ravager* with a Grumman Avenger about to take off from its short deck.



acquired the most appropriate motto: "Learn to Test: Test to Learn". At that time a typical course lasted just under a year, and was composed of about 30 students.

Jan graduated from the course at the end of 1944, and on January 5, 1945, was posted to the Aeroplane and Armament Experimental Establishment (A&AEE) as a test pilot, which meant that he remained at Boscombe Down, but in a greatly different capacity. The A&AEE's role was to test aircraft, not only to ensure that their flying characteristics were suitable for the tasks for which they were intended, but also to ensure that they could do those tasks when flown by young pilots in operational squadrons. For this purpose the unit was divided into four squadrons: A Sqn, which tested fighter aircraft; B Sqn, which tested bombers; C Sqn, which worked with aircraft intended for the Royal Navy's Fleet Air Arm (FAA); and D Sqn, which tested non-military aircraft.

Zura was first assigned to C Sqn, where he tested a variety of British and American naval aircraft. At that time, fighters operated by the Navy, such as the Fairey Fulmar and Firefly, had relatively poor performances compared with American machines performing in the same roles, Grumman Hellcats and Chance-Vought Corsairs to name just two. This situation resulted in consideration being given by the Air Ministry and the Admiralty to the conversion of suitable RAF fighters for naval use.

As an ex-RAF fighter pilot Jan had no experience of landing on a carrier, and, since he was now flying naval aircraft, this omission had to be rectified. So he was sent off to the Naval Air Station at Easthaven in Scotland, which operated an aerodrome dummy deck landing (ADDL) school where he could practise carrier-type landings on dry land. The simulation was done on a runway which had all the markings and dimensional limitations of an aircraft carrier's deck. A pilot was directed on his approach by the hand signals of a Deck Landing Control Officer or "batsman", so named because of the large table-tennis-type bats he held at arm's length to indicate the changes required in an aircraft's attitude to ensure a safe touchdown (see *Carrier Capers*, November 1999 *Aeroplane*). Jan made a total of five successful flights over three days in a Supermarine Seafire III, essentially a Spitfire with arrester gear and folding wings for shipboard stowage.

Having qualified on the dummy carrier deck, Jan now had to land on a real carrier. To this end he flew out over the North Sea on November 29, 1945, where *HMS Ravager*, an escort carrier, was cruising. This American-built vessel was essentially a cargo ship with a quite short wooden deck as a superstructure. Zura was flying the Seafire III again, which, even in its original Spitfire form, was noted as being a rather difficult machine to land owing to its narrow-track undercarriage and the poor view forward over the nose. But this was a case of type experience really counting. He made four landings and take-offs with no problems, and thus became one of probably very few Polish pilots to fly from a carrier. **A**

IN PART 2, NEXT MONTH: Inventing the Cartwheel