Ca Julius Cesare at Leaside Aerodrome. (W.C. Landrigan Collection)

Ca GIULIO CESARE WAS A LADY

(Adventures of a participant in the great New York – Toronto Race of 1919)

BY COL. PHILLIPS MELVILLE, USAF (RET)

Foreword By K. M. MOLSON

Soon after the story of the New York/Toronto Air Race appeared in the Journal of the Canadian Aviation Historical Society and the Journal of AAHS, I was pleased to be put in touch with Col. Phillips Melville by Herbert S. Fyfield Jr. Col. Melville prepared his story of the Race, unique in that it is the only story by one of the participants. He also elaborated on the previous article with additional information which will be of interest:

The emblem painted on the side of the Ca.3 was a winged goat, the device of the Caproni C. (Caproni equals goat in Italian). It was painted on the aircraft by Col. Melville himself and he removed and had the emblem in his possession for some time after the aircraft was scrapped. In front of the goat's knees were the words "Sena Cozzar Dirrco," which Col. Melville translates roughly as "nothing can stop us."

Col. Melville notes that the Col. Brereton mentioned in the N.Y./Toronto Race story commanded the Allied airlift units that made the paratroop drops in Normandy and the Rhine in WWII. He also said that Roullett should be Roullot. Roullot was shot and killed in 1920 at Mitchel Field while instructing an officer on how to handle a .45 automatic hand gun.

Col. Melville learned to fly at Foggia, Italy, first on Maurice Farmans and then on Capronis. The Chief Instructor for the U.S. at Foggia was 1st Lt. Harold R. Harris who later became the first man to save his life by means of the manually operated parachute (October 1922) and still later became a senior officer of Pan American Airways. At the time of the race Col. Melville estimates his total pilot time on Capronis as "about 50 hours" and "not more than 70."

On my return from overseas duty with the American Expeditionary Force in December, 1918, I accepted an offer by the U.S. Air Service of a one-year extension of active duty during which I could make up my mind whether to apply for a permanent commission in the Air Service or return to civilian life. Given a choice of station, I asked for and obtained an assignment to Hazelhurst Field, the name bestowed by the Air Service on the old flying-field near Mineola on Long Island, still generally referred to as "Mineola."

Strolling about the field after reporting for duty I was both surprised and delighted to discover in one of the hangars an Italian Caproni tri-motored biplane bomber, Type-Ca3, and more generally referred to as the "Ca-450" because these figures represent the total horsepower produced by the three Isotta-Frascini engines with which these planes were equipped. It was the model which had been in general use on the Italian front during 1918, and although a more powerful model was being introduced at the time of the Armistice, many Ca-450 were still in use. More particularly, this was the type of plane on which I had completed my advanced training at the 8th U.S. Aviation Instruction Center, A.E.F. at Foggia, Italy. Of the nearly 500 U.S. airmen who underwent flying training at Foggia 131 had graduated on Capronis before the Armistice. Some 60, or more, of the latter saw service on the Italian front, and the remainder were sent to France or to England where U.S. night-bombardment Groups were in process of formation. I was among those who went to England.

This Ca-450 was being maintained in top condition by a detachment of Italian mechanics whose primary task was the assembly of a recently arrived Caproni triplane, modified, or designed, to take three Liberty engines. This detachment I learned from Capt. Ugo D'Annunzio, RIFC, Officer-in-Charge (and son of the famous Italian Poet-Aviator) was the remnant of an Air Commission sent from Italy to the U.S. during 1917 in connection with the decision by the U.S. Government to build Caproni bombers for the A.E.F. The Commission had brought a number of airplanes with it, and some of Italy's best pilots to demonstrate them.[1] The shipment included at least two Caproni triplane bombers; three of the Ca-450 type, two SVA-5 fighters, and four SVA-9 two-place reconnaissance planes. (I later found four of these S.V.A. biplanes at Hazelhurst, stored in a locked hanger.)

None of them had been flown for some time, and in the case of the Caproni (prior to my arrival) there had been no U.S. pilots on the field with multi-motor experience. The local pilots preferred to fly the DH-4s and JN4D-Hs with which they were familiar. The item of information learned from Capt. D'Annunzio that interested me most was that, on departing for Italy following the Armistice, the Commission had donated the Caproni, the last one left, to the U.S. Air Service. Although she still wore Italian colors and had the name – Ca. GIULIO CESARE lettered on her nacelle, she had become a "naturalized" American and was ripe for an affair with a U.S. pilot.

I lost little time in advising Capt. D'Annunzio that I intended to do a lot of flying with GIULIO. As I believed I detected a gleam of doubt in the eyes of the Captain and several of his mechanics, I decided to be properly equipped when I appeared to take her into the air. When I turned-up a day or two later to do this, I was wearing my Italian War service ribbon, and carried over my arm a handsome, black leather three-quarter length flying coat similar to those effected by Italian officer pilots (which I had purchased the preceding day at Abercrombie & Fitch in New York for the then considerable sum of $50.00). I was also carrying the original cork flying helmet which had been issued to me at Foggia. This was spectacular, for I had decorated it with black and white stripes running fore-and-aft. The effects of these impedements on the Italians was noticeable as they wheeled Ca. GIULIO CESARE out of the hangar and placed her on the flight line at my disposal.

The ensuing test-flight was a delight. I flew solo, and the Caproni jumped-off the ground almost before I had all three throttles fully open. (Note: The procedure was first to advance the throttle of the center engine a short way to assure that engine was really running. One then gradually opened the outboard engines to full-throttle in a manner that kept the airplane rolling straight, at the same time pressing forward on the control-wheel to raise the tail and give the center propeller more clearance from the ground. When in take-off attitude this throttle also was opened to full power.)

The unloaded airplane climbed rapidly as her three Isotta-Frascinis sang their full-throated song in perfect unison. I levelled off at 2500 feet, throttled back to cruising speed, which in the case of a Ca-450 was about 85 mph, and executed a series of figure-eights and steeply banked turns. GIULIO responded promptly to the slightest movement of the controls with dignity and grace like a perfect lady. After flying around for about an hour, I descended and finished the demonstration with a good landing. The Italians appeared to find the performance satisfactory.

When the "Great New York - Toronto Air Race" was first announced by the Press early in July, 1919, and that the U.S. Army Air Service would be represented by a large number of entries, there was immediate and lively speculation among the pilots stationed at Hazelhurst and Mitchel fields as to who might be lucky enough to be chosen to participate. There was no lack of airplanes. The Air Service possessed a large number of DH-4s, the further shipment of them to Europe having been halted following the Armistice. Also on hand were a large number of JN4H's – an updated version of the famous 'Jenny' – equipped with a 150-HP Hispano-Suiza engine, in consequence of which they were termed "Hisso-Jennies." These were not fast, but rugged and comparatively reliable – an important factor in a long-distance, cross-country race. Also available were a number of American-built SE-5s, – reproductions of the very successful British fighter. A number of German fighters of various types were in the U.S., having been brought over from Europe for study, the best of which was the Fokker D-VII. However, except for two Fokker D.V11s none of the other German planes appeared at the starting-line. Presumably, it occurred to someone that it would be impolitic to risk the possibility that one of the planes of our late enemy might win the race against the best that the U.S. had to offer.

Of particular interest as a prospective entrant was the LePere two-place fighter/reconnaissance/day-bomber of American design which would have given a good account of itself in combat had it reached Europe. Another new type was the Vought VE-7, a two-place advanced trainer which resembled the French S.P.A.D. in appearance, but was lighter and more graceful. Both the LePere and the Vought had recently emerged from the experimental stage, and there were but a few examples of each.

Alone of the several dozen pilots stationed at the Long Island airfields, this writer failed to share in the excitement regarding the forthcoming race; his esteemed GIULIO CESARE was hardly a racing plane. She had been built for load-carrying, – not for speed, and there seemed to be no prospect whatever that she could be an entry. Then, a new development suddenly improved the possibility that GIULIO might be in the starting line-up. It appeared that the organizers of the race, wishing to arouse public interest in the possibilities of air travel, had decided to create two races in one: a speed contest and a handicap event, with separate prizes for each. Accordingly, a formula which involved wing area, power, and load, was devised to provide an "Index Figure" by which planes entered in the handicap event would be on a substantially equal basis. This attracted the attention of those airplane manufacturers who had turned to the production of passenger-carrying aircraft when their contracts for warplanes were cancelled, and several passenger carrying planes were entered.

A little figuring convinced me that the "index" for a Caproni would be highly favorable. In fact, according to my reckoning, if GIULIO was entered in the race and made the round-trip to Toronto, and back, without a forced-landing or other delay, we could win the handicap event even though we might be the last to finish.

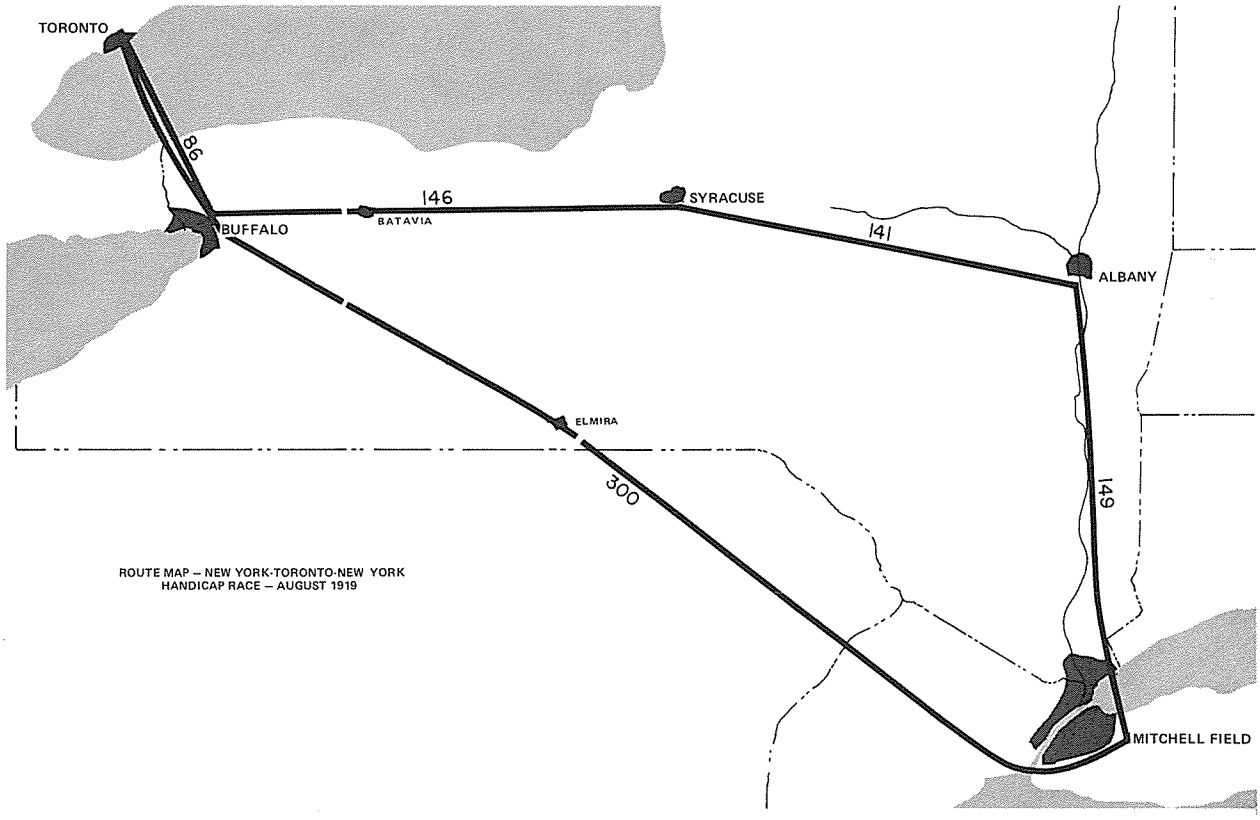
I lost no time in presenting my findings to Colonel Archie Miller, Commanding Officer at Hazelhurst Field, with the argument that the plane qualified as a load-carrier, and as a passenger-carrier as well. The latter was easily demonstrable. The two machine-gunners were no longer necessary, nor was the co-pilot bombardier. They could be replaced by "passengers" (I had in mind useful ones – like mechanics and a navigator.) Colonel Miller proved amenable to reason; strings were pulled, and presently Ca. GIULIO CESARE became an official entry in the race.

My immediate task was to assemble a crew. The Italians were gone by this time. A lightning-bolt had struck the hangar containing the triplane, collapsing the roof which, in turn, demolished the nearly completed airplane. Captain D'Annunzio had then resigned his Commission and had joined the Isotta-Frascini Automobile agency in New York City. He still visited the Long Island airfields occasionally, driving a stripped-down Isotta, to the admiration and envy of all. I already had, however, one of the finest engine mechanics I have ever encountered. He was Master Sergeant Lewis W. Williams, age 21, who had attained this high grade in just two years. In normal times this would have required twenty. He picked as his assistant Sergeant ? Lelko (initial forgotten) an efficient, hard working type who did well whatever was required of him.

As I intended to do all of the flying myself, for indeed this was a particular object of the whole exercise so far as I was concerned I was looking for someone who was good at map-reading rather than for a co-pilot. I had yet to find one when Lieut. William Flake, an administrative officer whom I knew only slightly, approached me and begged to make the flight. He was robust, eager, and claimed he could read a map, so I signed him on as time was growing short. He was to prove very useful throughout the flight except in the rather important field of map-reading, at which he was, frankly, terrible.

For that matter so were the maps we would have to use. There were as yet no proper aviation maps. The only ones available that could be conveniently handled in the cockpit of an airplane were (a) The Rand-McNally Railroad Map which showed the rail lines and junctions quite accurately, but little else, and was of distressingly small scale; and (b) a map issued by the U.S. Post Office which showed cities, towns and rivers, streams, and small bodies of water very well. It was of larger scale than the Rand-McNally. Neither map revealed the nature of the terrain by contouring. One could only imagine the general location of rugged country and mountains from the manner in which the railroads wandered about.

August 24th – the day before the start of the race – arrived and I had not yet heard the order in which the contestants were to take-off, though I understood that they would depart at intervals to reduce congestion at the intermediate, control points. These were Albany, Syracuse, and Buffalo, where each contestant was required to land and refill his fuel tank(s). One had to remain at least a half-hour on the ground before proceeding. I, therefore, paid a visit to Race Headquarters at Roosevelt Field which adjoined Hazelhurst, to get this information. Here I learned that the racing pilots had already determined their starting number by drawing from a hat. I had not been invited to this ceremony for my starting position had already been established – I was to be the last one off. This arbitrary decision was explained to me thus – "You see, Lieutenant, if you were to start early and crack-up with that big plane of yours in the middle of one of the control fields, it might take quite some time to clear away the wreckage. Meanwhile, planes would be arriving from both directions in need of gas. Unable to land, they might have to circle the field until their fuel ran out, and we would then have planes falling out of the sky like flies." (Or in some such words.) Well! there appeared to be nothing I could do to alter this decision, and it didn't seem too important. At any rate, it would be easy to remember my starting position.



ROUTE MAP – NEW YORK-TORONTO-NEW YORK
HANDICAP RACE – AUGUST 1919

The Race was to have started on the following morning, Monday, August 25th. Bad weather prevailed, however, with rain, wind, and a low ragged ceiling. A postponement was called. The weather improved somewhat during the afternoon, and a few of the contestants got away. All but one of them got as far as Albany, and several made it to Syracuse. It was evident that GIULIO CESARE would not get into the air until noon of the next day, so her crew relaxed and got a good night's sleep.

It was shortly after noon on Tuesday, August 26, that we cleared the ground and headed for Albany. The sky was overcast but the air was still, there were no clouds at low level, and visibility was excellent. We were still climbing as we crossed Long Island Sound, but levelled-off on reaching 3000 ft. and throttled the engines to good cruising speed. They had to get us to Toronto and back – a distance which exceeded 1,000 miles – and it was endurance rather than speed that we hoped for. Presently, we sighted the Hudson River, and all that was necessary was to follow it all the way to Albany. It was a smooth flight, the engines ran beautifully, and the scenery was interesting. We were still about ten miles from the city when we spotted the airfield on its outskirts. As we circled overhead preparatory to landing (this was another requirement) we could see that the field was small and had a dip in the middle. We also saw evidence that several of the contestants had come to grief here, but the field presented no problem for GIULIO and she floated in and settled onto the ground at about 45 mph as easily as she always did at Hazelhurst Field. We had made the 150-mile trip in slightly less than two hours – ground to ground – at an average airspeed of 80 mph.

We experienced some delay in refueling as there were a number of planes ahead of us. Gasoline trucks in those days were neither large nor plentiful, and such as there were spent more time away from the field being refuelled themselves than they did in servicing the racers. The alternative was to refuel by hand from 5-gal. cans, and this we did here and elsewhere throughout the flight since we had the manpower to do it. It was at this activity that Lieut. Flake demonstrated marked talent and amply earned his passage. The process involved some danger, for it was necessary to employ a large funnel lined with chamois to strain out sediment and water, and the funnel had to be carefully grounded lest a spark of static electricity start a fire. We were nearly as long on the ground as it had taken us to reach Albany, but there was ample time to reach Syracuse before dark. So we pushed on.

This portion of the flight also went well. There was little need to study our maps except to determine our rate of progress. The main highway, the railroads, and the Mohawk River all led us in the right direction, and it was only necessary to maintain the corresponding compass-heading. There was a light headwind, but no turbulence, and we made good progress as JULIUS droned along at my preferred 3000 ft.

We reached Syracuse late in the afternoon, the sun still well above the horizon. The field here was in the form of an "L," the longest arm being about 1200 feet in length. This was more than ample for GIULIO and we landed on good, level ground and taxied to where refueling was in progress. The business of taking on fuel was begun as soon as possible. It went slowly, however, and by the time we were ready to go the authorities had decided that it was too late for further departures for Buffalo. So we put GIULIO to bed by staking her down, took a look at several planes that were already headed back to New York, got something to eat, and went to bed in accomodations provided nearby. It had been a good day, but I regretted that we could not have started earlier and gotten as far as Buffalo, at least.

The morning of Wednesday, August 27th – dawned sunny and bright. The ceiling was unlimited and not a cloud was in sight. At the time we taxied out for take-off, which, – for one reason or another was delayed until after sun-up, – a northwest wind was blowing. It favored the longer runway, but I noticed as we rolled along that the field was still soft in spots from the recent heavy rains, and decided to take advantage of every foot of its length. Approaching the far end as closely as possible and keeping the Caproni moving, I brought her around in a wide sweep which was checked by speeding up the inside engine and – at the instant that we were headed correctly – opened both outboard engines to full throttle, followed immediately by the center engine. The plane responded promptly in spite of ground conditions and we gained speed without hesitation. After a run of about 350-ft. GIULIO was ready to fly. I held her down until we had plenty of extra speed then lifted off in a sharp zoom to clear the high hedge that marked the far boundary of the field. We did so by a wide margin and began a gradual climb to my favored 3000-ft. It is an altitude which provides a wide view around and ahead from which it is easy to identify highways, railroads, etc. from the map. For a while all was serene. But soon we became aware that our progress had slowed and GIULIO began to rock. The wind was gaining strength. We dropped down to 2000-ft. hoping to make better progress. About this time a DH-9A passed us from behind. He was doing 25-30 MPH better than we were, and soon disappeared ahead. Ten minutes later, an SE-5 also came up from behind. The pilot waved as he went by close on our right hand and was off in pursuit of the DH-9A. (From a study of Mr. Molson's account of the race I believe the DH-9A was that flown by Lt-Col Brereton and the SE-5a by Lt. Steinle. Strange as it may seem I cannot recall seeing any planes in the air at any other time throughout the race. The speed racers were, of course, hugging the ground and boring along at full throttle. As a competitor in the 'handicap' event my main object was to make it to Toronto and back without risking trouble or wandering off course.

It was soon apparent that the wind had increased and was dead on our nose. GIULIO was now rocking about and our progress had slowed. We dropped down to 1000 feet. We had been flying for nearly two hours when a large town appeared ahead; Flake was not sure what it was. I was fully occupied in keeping the Caproni on an even keel and had left the map-reading to him. However, after a consultation achieved by shouting at each other, it was mutually agreed that this could only be Batavia, about 100 miles from Syracuse. We had 50 more miles to cover to reach the Curtiss Field at Buffalo. Our speed over the ground had averaged no more than 50 mph. After passing over Batavia I brought GIULIO down to near tree-top level. The trees were bending in the force of the wind and the long grass, or oats, in the fields was waving like the waves of the sea. The air was extremely rough as we were experiencing contour turbulence, and I was sweating and unhappy as I swung the control-wheel back and forth and regretted not having a co-pilot to relieve me at the controls for awhile.

We were, perhaps, five miles beyond Batavia when MSgt. Williams appeared at my shoulder with the disturbing news that we were leaking water rapidly from the center engine. A stud was loose, and in spite of efforts to tighten it, he had been unable to do so. Its threads were evidently damaged. He asked how long it would be before we would reach Buffalo? I replied that it might take an hour to get there. Williams expressed doubt that we should run the center engine that long. He did not know how long we had been losing water having only just discovered the leak. He would have tried to replace the stud, but for the fact that the spares were buried in the front cockpit. It seemed at the time our best course would be to land at the first good opportunity and fix the leak. I doubted that under the conditions that confronted us that we could reach Buffalo on two engines. Caproni Ca-450s had returned safely from bombing raids on two engines, but they had had the advantage of high initial altitude and their home airfields were not far behind the front lines.

We were at low altitude, bucking a headwind of 35-40 mph in air that was more turbulent than any I had experienced hitherto. Moreover, I was not sure of this Caproni's performance on two engines, never having been required to make such a test. I decided

to keep the center engine running and to make a landing at the first good opportunity. A few minutes later a large field appeared dead ahead, surrounded by trees, but appeared level and was not under cultivation. As we topped the trees on the near side I closed the throttles and nosed down. The strong wind allowed her to settle onto the ground like a tired kite.

We piled out to stretch our legs and take stock of the situation. It presently developed that the situation was worse than I thought. We had no substitute for the damaged stud, since the Italians employ the metric system in building their engines and we still use the awkward system of measurement left us by our British forebears and no stud that would fit. But. MSgt. Williams was equal to the occasion. He said, "Lieutenant, I'll take his Italian stud, go over to the highway and thumb a ride into Batavia, locate a machine shop, borrow a lathe and make a duplicate." "Excellent, Sergeant, vaya con Dios, but remember that every tick of the clock is adding one second to our racing time, so make it back here as soon as possible." Williams went and did what he said he would, but the doing consumed nearly three hours.

The new stud fitted perfectly, and we lost no further time in starting the engines after putting a couple of buckets of water into the center radiator from a stream nearby. Engine-starting was, of course by the pull-through method and fortunately, they fired on the first attempt. The wind had diminished considerably during our delay, but was still strong enough to allow us to take-off straight from the spot on which we had come to rest. GUILIO cleared the trees on the far side of the field with ease, and we were soon on course for Buffalo.

We landed at the Curtiss Field forty-five minutes later. It was by far the best flying-field we had yet encountered. The sun was low on the horizon, but we still hoped to get away for Toronto. But by the time we had completed our refueling it was beginning its disappearing-act and the Controller said, "Lieutenant if you were to take-off now and were to land in the middle of that big lake out there, we couldn't get a boat on the way before dark, and then we might not be able to find you." This made sense, and in fact I hoped he would say something of the sort, as we were all tired. For my part all I really wanted was to get something to eat, and then find a bed to crawl into.

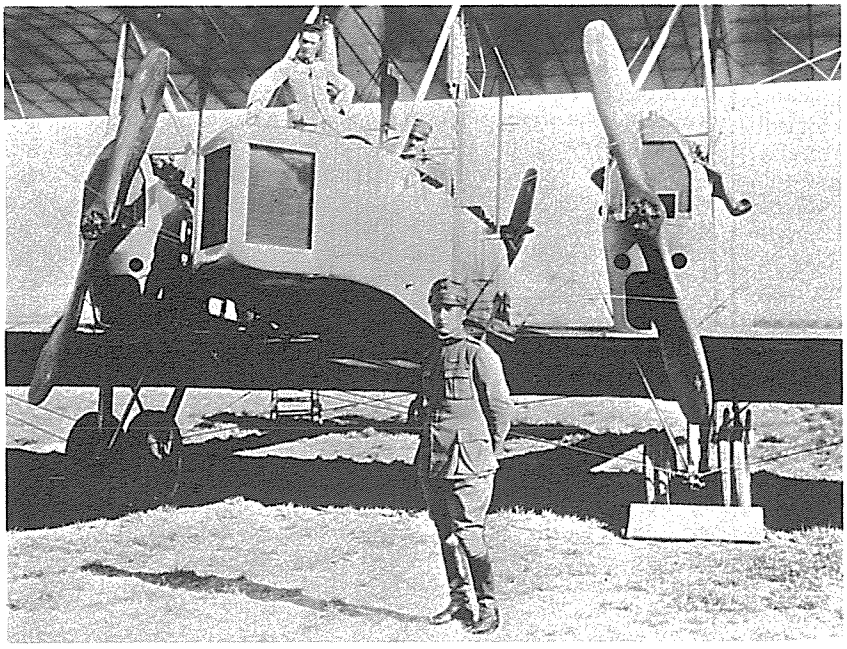
Expecting to make an early start, we were up and ready to go at sunrise. The Controller was not on hand to clear us, however, and failed to appear until nearly eight o'clock. Evidently he had had a hard day too, checking planes in and out as they came and went in both directions. There were also several cripples which needed help in getting back into the race. He finally showed up about eight o'clock and sent us on our way. This was Thursday, August 28th. As the race did not end until midnight of Friday, we had ample time to reach Toronto and then retrace our outward flight back to Long Island.

We were still climbing gradually as we passed Niagara Falls and had a splendid view of them and the rapids below. We were at 3000 feet as we crossed the shoreline of Lake Ontario. At this point we were approximately half-way to the airfield at Leaside which was our destination, and were making good speed thanks to a moderate tail wind. The gale of the preceding day had blown itself out; the skies were clear and visibility excellent. I continued to climb hoping to find more wind at 5000 feet and also because the Lake, which was thirty-five miles wide at this point, looked very large indeed and there wasn't a boat in sight anywhere. Shortly thereafter, the Canadian shore appeared as a thin grey line near the horizon ahead. So I nosed GIULIO down a bit and we started to go faster.

As the Canadian shore neared, I put GIULIO into a shallow dive to make-up time lost in the climb to altitude. Toronto and Leaside Field were long since visible and we landed there without incident. With the idea of making a quick turn-around we immediately went to work at refueling, and had completed this about the time our required stay of half-an-hour had elapsed. On take-off we headed promptly out over the lake on a climb to 3000 feet which I decided was sufficient for the return journey and would keep us below the stronger wind aloft.

We were five or six miles from shore and still climbing when I detected a sudden change in the rythm of the engines. Glancing toward the left, I was startled to see a solid column of water shooting from one of its backward-raked exhaust stacks. The water was striking the upper wing with the velocity of a firehose and streamed behind in a cloud of fine spray. My guess was that an exhaust valve had snapped, and dropping into the cylinder, had been punched through the cylinder-head by the piston. The cylinder had become a highly efficient waterpump. I immediately closed the throttle and switched-off the engine. The propeller, however, continued to 'windmill' steadily and was retarding progress. I was unable to stop it. Once again a decision had to be made whether to proceed on two engines, or turn back and land at Leaside. It was obvious that this engine problem could not be

The U.S.-built Caproni with three 400 h.p. Liberty-12 engines. Capt. Ugo D'Annunzio, of the Italian Mission is in foreground. (Photo – Museo Aeronautico Caproni di Taliedo) At right, Lt. Phillips Melville, 1918 photo.



solved in a few hours; that we were for all intents and purposes now out of the race which officially ended at midnight of the following day. From the point of engine failure to a landing at Buffalo was nearly 80-miles, and I was not sure that we could remain aloft on two engines that far. Why take a chance? The Leaside airfield, moreover, had facilities that would be needed in repairing or replacing the engine. The latter was a compelling reason for turning back and this we did, making it easily on two engines.

It was bad luck to lose an engine when we still had a good chance of finishing before the final hour. Bad luck, however, is sometimes tempered by good; such was the case in the present instance. When collecting spare parts that might be useful during the trip, such as nuts and bolts; hose connections; sparkplugs, etc. plus a spare wheel and tire, I had come across a pair of jacketed Isotta-Frascini cylinders complete with valves and springs, etc. I told MSgt. Williams to bring it along, not because I thought we might need it or its accessories, but because it weighed about 25-lbs. and all these spares were being loaded into the front cockpit where we needed about 200-lbs to balance the plane. The stabilizer of a Caproni was a fixed surface that could not be adjusted from the cockpit. I definitely did not want anyone riding out there for it was a dangerous position in the event of a nose-over in a forced landing. Nor did I want someone's head and shoulders bobbing about to obstruct my view.

The pair of cylinders was exactly what we needed in the present instance. Our "Engineering Dept." got to work immediately after we were parked, and by evening Williams and Lelko had the damaged cylinders ready for removal. This was accomplished the following morning. The spare cylinders were now put in place and the work of installing the overhead camshaft began. The work went forward without let-up and Flake and I gave a hand whenever we could. It had suddenly become important to all of us to get the job done and be on our way home before it was forgotten that we had been in the race. Toronto went unvisited. Comfortable accomodations had been provided at Leaside by the Canadians, and we ate at a cafeteria on the field throughout our stay. The final, delicate task of re-timing the engine was completed by mid-afternoon on Saturday, August 30th. The weather was unfavorable for flying, however, so it was decided that all concerned should get some rest and that we would make an early start the following morning.

During the night the weather had cleared and conditions were excellent for flying on Sunday morning, August 31st. We breakfasted as soon as the cafeteria opened, and a short time thereafter were on our way. We flew across the lake without incident, the newly repaired engine functioning equally as well as the other two. Again we had a splendid view of Niagara Falls, and landed at Buffalo at about nine o'clock. I had been debating a non-stop, direct flight back to Long Island as a good way to end our expedition. The distance was about 300 miles, well within our capacity. The indirect outward route added-up to 436 miles. So we would save 148 miles and about 1¾ hours of flying time. The weather report appeared favorable for the direct route. I decided to take it.

Having topped-off the fuel and oil tanks, we took-off on a compass heading established by the "Two-point" method. This was a simple and practicable system for compensating for winddrift, employed by British night-bombing squadrons for reaching targets behind the German lines on dark nights. The procedure was as follows: Two lorries, each carrying a bright light, were sent to designated points behind the British lines in line with the target for the night. Here the lights were to be displayed at a prescribed time for a specified period. The bomber on take-off climbed to the altitude at which the flight was to be made and maneuvered until the lights were in line. The pilot then flew across the lights in the direction of the front, timing his flight between them. Knowing the distance that separated them – usually 5 miles, or thereabouts – he was able to determine his ground speed and hence the time of flight to his target. A particular feature of the process was that in order to keep the lights in line he had to alter his heading to the right or left, as the case might be, in order to eliminate drift and make good a straight course between them. Having accomplished this, he noted his compass reading and maintained it thoughout the remainder of his flight to his target.

The same system was also usable by day. Instead of lights one chose from the map a couple of prominent landmarks which were suitable spaced and in the vicinity of the take-off. Actually, it was a more precise version of the method that experienced pilots instinctively employed in flying cross-country. It was accurate if properly executed so long as the strength and direction of the wind over the course remained the same. Any change would be revealed by position in relation to landmarks encountered en route and a corresponding change made in compass heading.

Because our maps indicated that the railroads and streams wandered about in a seemingly haphazard manner in the area over which we were headed, it was obvious that we would not find it easy to follow progress on our unsatisfactory maps. The nagivational process, just described, could be most helpful. So, with GIULIO once again in the air we followed this procedure, and headed on the southeasterly heading thus established.

The first half hour of flight indicated that we were making good time, but the terrain was becoming lumpy below. It was soon thereafter that MSgt. Williams appeared at my shoulder with the unhappy news that we were again losing water from the center engine. At that moment we were approaching a low hill crowned by a large open field. I thought it wise to land and remedy the difficulty, so I set GIULIO down on the excellent spot. We had barely stopped the motors and climbed-out of the plane to stretch our legs, when Sgt. Williams announced that the trouble was fixed. It had been accomplished merely by tightening the clamp of a water-hose – or something equally simple. Our take-off was slightly down hill, and GIULIO sailed off into space after a short run. We resumed our previous heading.

Below us the country in all directions had become hilly and open fields were a rarity. We had lost our position on our Railroad Map as the rail lines curved about and, sometimes, disappeared into tunnels. More disturbing, we began to encounter clouds at our level, so we dropped down to remain below them. The sun had by this time disappeared behind a high overcast, and as we advanced the clouds rapidly increased in size and numbers, and now had a "dirty" look. But we expected soon to sight Elmira, N.Y. a large town close to the direct course, from which would determine our position and rate of progress. I hoped we had not missed it, hidden among the hills.

We had been told that there was a flying-field on one of the hilltops overlooking the town, and this might be a good refuge if we found the weather closing-in ahead. After what seemed an age a large town did, in fact, appear ahead. We hoped it was Elmira. The clouds hereabout were numerous and ragged, some of them so low that they touched the tops of the higher hills and we were flying at only 1000 feet. I circled in an attempt to locate the alleged flying-field. We did not see it. Perhaps this was not Elmira. As we threaded our way among the clouds I observed that it was considerably lighter toward the southeast which was the direction in which we wished to go, so without wasting further time searching for the perhaps non-existent landing field, we resumed our original heading once more. The clouds now began to diminish in size and number and we were able to increase altitude.

At this point I spotted a long meadow stretched along one side of a stream. Here was a good opportunity to find out exactly where we were. A few animals in one corner indicated it was grazing land, so for the second time on our "non-stop" flight I set GIULIO on the ground. We had scarcely stopped rolling when a man appeared. We asked him the name of the large town we had passed over a short time before and he replied – "Elmira." So we had flown a good course after all, and need only continue on the

same heading. As our engines were still turning we took-off immediately and climbed to cruising altitude.

Thereafter, the clouds rapidly disappeared and the air was clear aloft. The sun also reappeared and the outlook became more cheerful. Downward visibility, however, had deteriorated. It was difficult to distinguish features on the ground which were still very hilly. This was due to smoke-haze produced by the many manufacturing towns and coal mines scattered throughout the area. The haze gradually assumed the appearance of what is now described as "smog." But GIULIO continued to snore contentedly along, and I knew that even though we might not know when or where it would be, we must eventually encounter the Atlantic Ocean, and I was familiar with its shoreline. We had now been in the air approximately three hours and should be sighting the Delaware River which ran at right angles to our course. However, we overlooked it in the haze in spite of the fact that it was a prominent landmark. It was perhaps twenty-minutes or half hour later that I caught the flash of sunlight on water. As we approached I saw that it was a river and that it flowed in the direction in which we were headed. Two bridges crossed, and I recognized one of them as that which carried National Route No. 1 across the Raritan River close to its mouth opposite the southern tip of Staten Island. Hurray! I now know exactly where we were. We had drifted a few miles from the direct course but were within 40 miles of Hazelhurst Field.

As we flew across Staten Island we were suddenly confronted by a new, seemingly grave menace. Below us an impenetrable bank of fog extended across our course from the middle of Staten Island-northward and eastward-as far as the eye could see. The tops of a few tall buildings in New York City poked their heads dimly above the grey sea of moisture to the north, serving as guideposts by which to orient ourselves. The question was – How far did the fog bank extend? Did it cover Long Island and Hazelhurst Field? I was worried. However, I had observed that fog on Long Island seldom extended as far north as Long Island Sound and anxiously sought some evidence that such was the case in the present instance. Meanwhile our engines purred contentedly along in calm air.

We had crossed over Brooklyn and the New York buildings were well to our left-rear when I spotted a round hole in the fog ahead. As we flew over this I looked directly into it, and recognized the buildings and tennis courts at Forrest Hills. We were within ten miles of home. A few minutes later the fog bank ended just as abruptly as it began, and there in the afternoon sunlight were Hazelhurst and Mitchel Fields. We had made it home, in spite of our difficulties, in as good condition as when we had started five days earlier. I felt so good about this that I proceeded to do something that I would not otherwise have done. On the downwind leg of our landing approach, I put JULIO's nose down for extra speed, then – at the right moment – pulled her around in a near vertical turn. As we straightened, the throttles were chopped and we made a fast, tailhigh landing which, aided by forward pressure on the control wheel to keep the tailskids from dragging, allowed us to roll nearly to the line in front of the hangar which was home. Thus ended our participation in the "Great New York - Toronto Air Race" of 1919.

To quote an often repeated saying –"There are Old Pilots; and there are Bold Pilots; but there are few Old, Bold pilots." Certainly, I qualify in the first category. But memories of the Race remain vivid.

The New York - Toronto Race – from my point of view – was an exciting adventure which provided a great deal of valuable experience during the few days that were involved. It also brought greatly increased self-confidence. In spite of anxious moments experienced at the time of our two forced-landings (those during the return flight were voluntary) I had enjoyed it immensely. It was a fine feeling to be the commander of "the largest airplane in the race" and the only multi-engined one to-boot. It was particularly satisfying to have been able to solve our mechanical problems ourselves, and bring the Caproni home again in as good condition as when she started. A large proportion of the field of contestants had not done so. 48 pilots had participated, several of whom started twice. 21 pilots had each experienced a forced-landing during the Race. Five, including myself, had experienced two and one pilot had three such landings. Seven airplanes had been wrecked or so badly damaged that they had been compelled to drop-out of the race. Miraculously, there had been only one casualty (injured, not killed). It was hardly a record that would build confidence in the public with respect to air travel.

I made one other noteworthy flight with Ca. GIULIO CESARE in 1919, as a result of which her picture appeared in the Rotogravure Section of the New York Sunday *Times*. At the request of Hearst International Newsreel Service – and with proper official permission – GIULIO took myself, Sgt. Lelko, a Newsreel cameraman and another passenger the full length of the East River to and around the Statue of Liberty, and back up the river again, passing under every bridge encountered en route. Referred to by the newspapers as "A daring flight," it was nothing of the sort. The center span of each of the bridges soars 150-200 feet above the river – as I had been careful to determine in advance. This was enough space to allow three Capronis, stacked one above the other, to make the flight in safety.

Early in 1920, I believe, I returned from leave-of-absence, or a spell of temporary duty elsewhere, to Mitchell Field (Hazelhurst had been relinquished by the Air Service to become a commercial airfield) and was shocked to learn that my beloved Ca. GIULIO CESARE had been assassinated – Yes! that's the word – just as surely as her great namesake had been, and for a similar reason, namely, to avoid an undesired event. "They" feared, I was told, that some pilot unfamiliar with her ways might take GIULIO out and smash her, and himself in the process. More realistically, it was considered uneconomical to continue to maintain this outdated, orphan Caproni for which neither spare parts nor replacement engines were available. So, in my absence, the killers came and took my Love apart, piece-by-piece, and carried them away until not a vestige of her remained. R.I.P.

What a unique museum-piece she would be if she existed today!

1. **One of the Italian pilots, Lt. Giovani Pirelli, was killed at McCook Field while flying an Ansaldo S.VA.5 on February 3rd, 1919.**

Col. Phillips Melville shows the crash helmet worn by him in 1918.