

GLIDING IN EGYPT: THE EARLY YEARS

Prelude

Gliding in the sense, evolved in Egypt in the early 20s, and was blessed with a great forerunner in the Frenchman, Louis Mouillard, one of the scientific pioneers of aviation at the second half of the XIX. century. 32 year old Mouillard had already been a seasoned researcher of bird flight when he arrived to Egypt in 1866, accepting a post as an art teacher in Cairo. However his main aim was to write a scientific book on bird flight, and as Egypt was a land of great many numbers of birds of prey, it offered good opportunities to broaden his observations and to deepen his knowledge on this field. He built a couple of models, and even a glider, in which he ended up breaking both of his legs! His book on bird flight, "Empire de l'air, essai d'Ornithologie appliquée a l 'Aviation", was published in Paris by C. Masson at 1881. His work had great influence on the development of the Wright brothers' gliders and aeroplanes.

Beginnings

After Mouillard, it was to be a long time before any further attempts of flying gliders in Egypt. In 1932 a couple of young Russians living in Cairo, and having been encouraged by the successes of gliding in Germany, built a primitive monoplane glider with wheels, as they presumed such a landing gear would be more suitable for sandy surfaces. Since in the vicinity of Cairo the terrain offered little in opportunities for slope or ridge soaring, they selected the desert airfield Almaza near to Heliopolis for their experiments using auto-towing as launch method. These attempts of glider flight, performed by a former WWI pilot, Naydenoff, ended in the glider receiving heavily damage.

In April of 1932 a young Italian foundry owner and sports power pilot, Vasco Marlia, together with a French professor, Jean Lozach, founded an association named "Groupe Mouillard". In Marlia's workshop the damaged Russian glider was rebuilt. (For landing gear the wheels were retained). The rebuilt glider took the name "Ibis", which was the name of a well known sacred wading bird of Egypt. The glider piloted by Egyptian pilot Mohamed Sidky performed its first flight at March 21st, 1933, launched by auto-towing.

In April under the auspices of the Royal Egyptian Aero Club, the Egyptian Gliding Club was founded. The Club purchased two French gliders from the French Gliding Association. The *Éole* was an open primary, and the *Sulky*; a nacelled primary. The Association sent Mr. H. Bouvier to Egypt with the gliders to provide introductory training. A small wooden shed was built on Almaza airfield where training for club members started initially under the leadership of Bouvier, later under Prince Abbas Halim and Marlia.

Lacking the necessary resources, all launches at the Club were done by auto-towing, which frequently resulted in damaged equipment. In the early 30s Prince Abbas Halim's glider training operation was visited by his friend László Almásy, the noted Hungarian hunting as well as exploration guide, cartographer and explorer of the Sahara, who happened to be a seasoned power pilot as well. He had previously visited gliding fields in Germany and was well versed on gliding literature. He was astonished how unsafe his

Egyptian friends operation was. He offered his help to develop a safer training method. With the help of an Egyptian engineer, Osman Hamdi, a method applying winch launches were developed with careful experiments carried out personally by Almásy, and soon a new training method was introduced under Almásy's supervision. Since 1933 was a busy year for Almásy which saw him away on explorations, and without his firm grip on training, the new gliding operation's gliders were again frequently damaged, and soon all equipment became useless.

It was around the time when Almásy returned from his expeditions, Marlia bought Kronfeld's two-seater glider, the *Fasold*, from Austria which was rechristened as "*Ibis-II*". Using a 800 m long cable and auto-towing, Marlia and Sydki performed many launches. During one of them the *Ibis-II* climbed to 400 m altitude. The 20 minutes flight made great impression on Taher Pasha, who was relative of King Fuad, and the president of the Royal Egyptian Aero Club. Taher Pasha, a keen sportsman, was also the Egyptian International Olympic Committee member, as well as the Egyptian FAI representative, and as such became an avid and powerful supporter of gliding in Egypt. (Taher Pasha was to later become instrumental in the Olympic Gliding bid for the 1940 Olympics). In 1935 the Aero Club took over the *Ibis-II* as well as the remains of the two French primaries and the Egyptian Gliding Club was dissolved. Four Italian gliders - two *BS-16 Bonomi-Zöglings* and two *BS-15 Ballerinas* - were also taken over by the Aero Club as the Italian colony in Cairo, which brought them to Egypt from the Bonomi works in Milan, did not have official permission to run a separate, independent club.

The Golden Years

Almásy on the request of Taher Pasha, took up the task to organise a new flying school in 1936. The new school employed the Hungarian Frigyes Hefty as a flying instructor. (Hefty was a WWI fighter pilot and one of the pioneers of Hungarian gliding). In the northwest corner of Almaza airport a metal hangar was erected for the gliders and the school used winch launches for training. Their winch was a modified car, a primitive solution compared to contemporary European equipment. The new gliding school owned 14 primaries, training and high performance gliders between 1936 and 1939. The fleet featured the *Éole*, the *Sulky*, two *Bonomi-Zöglings*, two *Ballerinas*, a *R-06 Vöcsök*, two *Zöglings*, one *Segel-Zögling (12 m Zögling)*, one *Wolf*, one *Grunau-Baby*, the *Fasold* and one *M-22*. The *Zöglings* were produced in Egypt, the *Vöcsök*, the *Segel-Zögling* and the *M-22* were imported from Hungary, in addition to the *Wolf* and the *Grünau-Baby* which had come from Germany.

In March 19, 1936, flight training began for the first group of 22 students from the University of Cairo, under the guidance of Frigyes Hefty. 181 flights were logged up to May 7, with six "A" certificates being completed. Unfortunately Hefty soon had to return to Europe, so Almásy took over the instruction. 484 flights were completed up to July 4, with fourteen "A" and five "B" certificates being completed. The school was closed down for the summer months.

A second camp for the new school started in early November 1936, and run to the end of May 1937. A new flight instructor, the Greek Hermes Celio, joined the school and he later became the school's CFI. Almásy was both the general manager and an instructor. During the second camp, the 82 students taking part managed a grand total of some 2456

launches, and there were 42 "A", 15 "B" and 3 "C" certificates that were completed. From 1936 on, the school's requirement to gain an "A" certificate required at least five gliding flights in a straight line, whilst the "B" certificate required five flights, two of which needed to include 180 degree turns, two flights with full turns, and a target landing within 25 m of a preset position indicated by a flag.

When the *Wolf* glider had arrived to Egypt in 1937, the opportunity for slope and thermal soaring opened up for Egyptian gliding. Using a cable of 1000 m, the *Wolf* would usually climb to around 200-240 m altitude. The first flight was only 7 minutes long, but flights of 15, 20 and 30 minutes soon followed as pilots were able to connect with thermals. As locating blue thermals was a difficult task it became standard procedure to observe kites. These birds of prey, common in Egypt, were experts in thermaling and "painted" the location of dry thermals for the pilots.

The newspaper "Al Ahram" offered a trophy for the first soaring flight from Heliopolis to the Cheops (Khufu) pyramid. This was won by Almásy piloting the *Wolf*. Since at those times civilian aeroplanes were not allowed to be used for aerotowing by the Egyptian authorities, Almásy turned to the British stationed in Egypt. The Royal Air Force personnel were immediately willing to help and he started his flight behind an Avro-Tutor, which towed him up to release height. This was the first recorded cross-country soaring flight in Egypt. The distance was 31 km and the flight lasted 31 minutes.

In 1936 Almásy and Hefty planned to ridge soar one of the pyramids, but the rising air over the pyramid's side proved to be too narrow for practical purposes. As a hillside suitable for slope soaring could not be found in the vicinity of Almaza airfield, a hill located 16 km west of the pyramids of Giza was the site where some slope soaring was practiced. A temporary wooden shed was erected at the base of the slope which was only 30 meters high and 200 m long.

In 1938 efforts were made to find a more suitable slope. More distant territories were searched from the air by Almásy and finally a 300 m high sandstone hill called "Iweibid Mountain" was located 80 km to the west of Cairo, between the railway and the road to Suez. The north facing slope was 10 km wide and lay in an east-west direction, perpendicular to the prevailing north winds in Egypt. It proved to be ideal for slope soaring. It also proved to be suitable to connect with thermals from the slope itself as well. A wooden shed was erected and besides the *Wolf*, a *Zögling* and the *Grünau Baby* were also transported there. Launchings were by winch. With the vast desert floor, unlimited opportunities existed to land practically anywhere, so experimenting was the order of the day. Even in a 6-8 m/s (12-18 kt) wind, it was common to be able to soar to 500 m, and many hours were flown over the slope. The desert thermals made it possible to leave the slope, however the unforgiving desert made long cross country flights dangerous, due to the difficulty of locating a small craft and its pilot in the dessert, so as a result, the favorable thermal conditions were not truly exploited. Most flights were made in east or west direction alongside the road and the railway, and Almásy on one flight managed to make contact with some standing wave behind the hill.

The third camp of the school began in mid-November of 1937, and lasted up to mid-April of 1938. During this period a total of 2901 flights were logged, with 51 pupils completing their "A", 6 completing their "B" and a further 4 completing their "C" certificates.

By this time the school had purchased the *M-22* high performance glider from the Technical University of Budapest. Some very good flights were done with this fine glider. One pilot had managed a very creditable climb to 1700 m over the desert, however this performance was to be overshadowed by a record flight in the same glider performed by the English Squadron Leader Edward Mole. Mole had been towed to a height of 4700 m (15,400 feet) by a RAF Hawker Audex, from which height he then performed 147 consecutive loops!

The school was closed down temporarily because of a fatal crash caused by negligence on the part of the pilot, and as a result, the authorities requested that the Aero Club draw up a new code of conduct, which was issued in the beginning of 1939. This forced break was used to start a serial production of the *Zögling*. The reopening of the school in February 1939 saw the following gliders available: six *Zöglings*, one *Segel-Zögling*, one *Allievo Italia*, one *Grunau Baby*, one *Wolf*, and the *M-22* high performance glider, a total of 11 machines.

At the end of the 1930's, the training of military pilots elicited higher priority in Egypt. The demand of the Defense Ministry called for a number of new students in 1939 with "B" and "C" certificates. For this purpose a two-seater Bonomi glider, the *Biposto Roma* was purchased. In the summer of 1939 a new airfield was built at Gabal Iweibid at Suez with a concrete hangar for six gliders and accommodation for 20 pupils.

In 1939 Almásy had expressed an opinion that the duration of pre-military pilot training was far too short, as pupils entered into the system too late in regard to their age. He proposed that youths at the age of 15 should start their preliminary training with gliders, as this was the earliest age that Egyptian law permitted young people to fly. He proposed to organise as an experiment, an eight-week long training camp for a group of high-school students and to train them on *Zöglings*, using winch launches to earn their "A" badge.

At the time of this proposal he discussed the method of this training with his CFI, Hermes Celio, and his assistant instructors. The result of this deliberation was an idea of developing a two-seater version of the *Zögling*. The training would be similar to the "single-seat" training as regards the number of takeoffs, and release heights would be gradually increased to where 30 second long straight glides could be achieved. When a pupil performed 10-15 of these 30 second glides without the intervention of the instructor, he would be ready to make 2-3 shorter solo flights with ballast fitted to the rear seat, before building up to longer flights, until he had achieved the duration required to be able to attempt his "A" badge.

The modification of the glider was carried out by Hermes Celio, and was test flown successfully, gaining its airworthiness certificate. It proved to be a great success, and during the tests, even 3 minutes flights were achieved with two adults, launching from a 1000 m long winch cable.

Epilogue

The promising development of gliding in Egypt was to be interrupted by the Second World War. Almásy, who was a Hungarian citizen, and who was one of the prime movers of gliding development in the country, had to leave Egypt in the autumn of 1939. The area was soon to become a theatre of war, and the chaotic political post-war years that were to follow in Egypt, were unfavorable for gliding. Many years were to pass before gliding was to restart in the country.

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A Zeppelin Budapest!

Miscellaneous:

Map of the Circuit of the Oases. 2nd International Egyptian Aviation Meeting organized by the Aero Club of Egypt. December, 1933.

Author's comment: This article is the byproduct of a research done by the International Glider Club Historic Group to clear up production of gliders around the world from the Outset.

Author's remarks

Different sources refer to glider types in Egypt in the 30s which differ from the above mentioned ones. However it looks like that similarities in appearance caused contemporary reporters having made mistakes as regards the types. For example an English source refers to a "Dagling" though the author is not aware of any sources stating that English Daglings were exported to Egypt during the 30s. However the Bonomi BS-16 as well as the R-06 Vöcsök had similar steel-tube rear fuselage structure which might be the reason of the mistake. A reference in 1932 to a damaged "Priifling" and "Zögling" probably meant SFVV Sulky and the SFVV Éole primaries. And a source probably wanted to refer to the BS-5 "Ballerina" when a reference were made to a "Professor". The author would be glad for any remarks concerning the types existing in Egypt in the 30s.