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SOURCES OF DEVELOPMENT OF AVIATION BASES IN UKRAINE. PERSONALITIES AND MEMORABLE PLACES

The article is devoted the problem of determination, maintainance and celebration in honour of birth-places and inventor activity of creators of world aviation, on the walks of life of Ukraine.

Ukraine is like a loving mother, despite of very difficult historical fate and everyday problems, has always supported and cared her sons, especially those who wanted to raise mankind to the wing.

Recognizing a man as the high value of the system evolution of the Universe, our ingenious countryman philosopher Volodymyr Vernadsky (1843–1945) wrote in the main work of his life "Scientific thought as a planetary phenomenon" (1943): "We can see as a permanent one and the same discovery the same idea again emerging in different parts of the globe, in different ages, without any possibility of borrowing". This little essay is written for the purpose of verification of this thought.

If we watch the map of Ukraine, on which marked the places of birth, creativity, eminent personalities of aviation thought and practice: the first aviators, engineers, pilots, makers of aircraft for the Earth atmosphere and space, then a large number and dispersion of the local aerie of the luminaries, pioneers, founders of aviation in Ukraine. These cities, towns and villages: Kyiv, Zhytomyr, Poltava, Kharkiv, Odessa, Feodosia, Yalta, Voronovytsi, Chervone and others. At these places as famous aviators of the XIX–XX centuries as V. Vernadskiy, O. Mozhaiskiy, I. Sikorskiy, P. Nesterov, F. Tereshchenko, S. Utochkin, K. Artseulov, S. Korolov, O. Antonov and others were born and created.

If you follow the ways of life of these people, the creators of world-class aviation, we can mark their close relationship with the people, culture, high level of civilization in Ukraine, which corresponded at the same time with simultaneous efforts of humanity in the implementation of the global industrial revolution.

Alexander F. Mozhaiskiy (1825–1890) is the descendant of the Russian Navy Admiral family after 35-years experience of the marine life circus the age of 40 years, began to work for the dream of all his life, the creation of aircraft that would be heavier than air. During all the years of service in Navy he perfected his design, which he conceived in 1876. At the same time Du Temple, Kliment Ader and Samuel Henson in France were worked of construction of vapour-planes. October of 1890, when took off Ader's vapour-plane, is adopted as the beginning of aviation era. We read in the monograph by N.V. Spitsyn "Ballooning in 100 years" (1884): "Mozhaisky aeronautic shell is one of the first in the world that was build in real sizes and and separated from the land person on board". This famous event took place on the estate in Mozhaisky Voronovytsi (Podillya). The manor, the park, the palace with 45 rooms (2500 m²) are preserved to our times. The paintings are preserved that Alexander Mozhaisky drew. The most valuable monument manor culture has two outhouses: avia workshope where Mozhaisky created kites, in which he flew and then vaporplane for the eight years in Voronovytsi.

Alexander Mozhaisky attituded tremulously to this manor, which belonged to the right of inheritance to his juvenile nephew, whom guardian he was. He did not sale, did not hypothecate this manor even when he needed money to build a "flying vapour-train" when he sold all his possessions, and sold the marriage ring, and even the uniform of flag officer. The genius of Mozhaisky, pioneer of aeronautics is that all the inventors were using natural ornithological counterparts before him, and Mozhaisky went the other way of creation of flying mechanical devices.

Our generation, when the independence of Ukraine has allowed review and evaluate the

contribution of the sons of aristocratic families, the national elite to the world aviation, must reconstruct Mozhayskiys' aerie.

And the U.S.A. president still is flying in helicopter that designed by our compatriot – kiever Ihor Ivanovych Sikorskiy (1889–1972). He was born in a large family of a doctor and a noblewoman on the corner of Ivan Franko and Yaroslaviv Val streets. He made his first helicopter at the age of twelve in this estate, in the workshops in the park. Ihor Sikorskiy has received the encyclopaedic education, played on the piano virtuosily, was fond of theater and visual arts and that has played a fateful role in his life and work.

Sikorskiy had leaved Petersburg Cadet Corps, in the age of twenty he visited to Paris and worked with Louis Blerio on a flying machine and with him flew over the La Manche in June 1909. He returned to Russia in 1911 and received a diploma of pilot. He created and flew on giant airplanes "Vityaz", "Ilya Muromets", set world record in speed when flew from St. Petersburg to Kyiv. He made PR flights and promoted aviation. The first woman in the world, a sister of Sikorskiy, has flew with him in 1912 on the sky. He has received the prizes of the competitions in military aircraft. All Kyiv were thrilled. The First World War and the Revolution began. Ihor Sikorskiy flew through Arkhangelsk to London and Paris in February 1918 and in March, with a small amount of money, emigrated to the United States. This is where fate leaded him, a music fan, to the concert of Sergei Rachmaninoff. The composer made a donation to the restructuring of roost on air workshop, but also allowed his name as a brand "Rachmaninoff Aero engineering corporation". Superior intelligence, kindness, laid in childhood, allowed Ihor to become not only the president of a successful company, but also to rally round himself the fellows like minded people, to create a family of four sons.

15 types of aircraft was created in the Sikorskiy's company to 1939. In this year he has returned to his childhood dreams of Kyiv, to the creation of helicopters "Vought – Sikorsky". Still all around the world civilian and military helicopters with single screw and automatic bias circuit fly.

Ihor descendants came to Kyiv, visited Kyiv aviation institute, went to the yard of the parental homestead, where the blind childhood home of our famous countryman looks at them by walled windows. The outbuilding in the yard of number of 15 needs our protection.

Ukrainian land cherished in its aeries many talented, multi-faceted genius. So many extraordinary things, so many mysteries in the life of this man, that in this brief essay we can not open even hundredth part of his achievements and sufferings. His name was Alexander Shamray, but he hided himself under pseudonym "Yuri Kondratyuk". He lived a life of exile. His name written in gold in the hall of fame space museum in Alamahordi and a creater on one side of the Moon has his name.

His mother was the teacher of Kyiv-Pechersk school. She was from the family of Von Schlippenbach, her name was Ludmila Shamray. Fleeing the Bolshevik repression, as the royal army officer, he received the pseudonym of Yuri Kondratyuk. He has graduated with a silver medal in 1916 in Poltava gymnasium and entered the Petersburg University, and in 1918 became an officer of the Russian army, then a white officer and therefore was forced to change name and patronymic.

In 1925–26 Kondratyuk was working on Krylovskiy elevator, ending the book " The conquest of interplanetary space ", which became the main scientific work of his life and direction for the space exploration in the world. The author created the theory of intermediate space stations (missile bases) in the form of satellites, the theory of these issues. Calculations of Y. Kondratyuk were used by americans in the creation of the programs of the development of the Moon. Regardless of K. Tsiolkovskiy he developed problems of aerodynamics, brought fundamental equation of rocket flight, presented his theory of multistage rockets, and most importantly, has offered to provide solar fuel rockets.

In times of global crisis in 1927 in Novosibirsk the Ukrainian genius built the famous elevator "Mastodon" by 13 tons, built of wood without any nails. Vision of the genius clearly seen in the ability to think strategically, globally, foresee future energy crisis of XXI century and the need to

switch to alternative energy sources. He designed in collaboration with P. Horchakov and M. Nikitin powerful wind farm to the Crimea.

He volunteered to the front, where died in 1942. The mankind only now comprehends and uses his ideas. His aerie Poltava appreciated merits of its fellow: Poltava Space Museum has his name, his monument is installed in Komsomolsk.

Cohort included the name of the famous Odessa pilot Sergey Isaevich Utochkin (1876–1916). The first aviator of Odessa, versatile athlete in the early twentieth century was the consummate pilot, who made over 150 flights to 70 cities in Russia. Born in Odessa in the family of a merchant. His childhood was harsh, adolescence was full of enthusiasm in different sports, especially bike and motorcycling, ocean yacht racing attracted him. He attached to his car the wings and tried to fly. First the flight of Sergei Utochkin was made in 1901, on the balloon over Odessa with Josef J. Drevnytsky. He began to build his private plane in 1902. He flew to Egypt on balloon. He was leaving Egypt for Paris to learn piloting by Wright and Blerio. He returned to his native Odessa with a desire to build an airplane. The first pilot, which in the Russian Empire rose in the sky, was M. Yefimov on the French device and the second, in March 1910, became Sergei Utochkin. By the end of the year a pilot group included 30 people. Utochkin became pilot tester, set the records, received prizes and awards, his flights were national public holidays.

The life of the falcon of aircraft ended tragically in 1916 in a psychiatric hospital. He was buried in St. Petersburg. His merit is the popularizing of the art of piloting, he aroused among young interest in aviation, inspiring to transform the military aviation into civil.

The monument with inscription "Кумир Одессы, воздухоплаватель и мечтатель Сергей Уточкин" stays at Derybasivska street in Odessa on the steps of his house. His name is given to streets and squares.

Kyiv of the late nineteenth and early twentieth centuries rightly considered a center of aviation. There was Aeronautics Company, its head was the student of M. Zhukovsky professor of KPI M. Delaunay. G. Adler, F. Aner, D. G., K. Kalinin, O. Karpeka, three brothers Kasyanenko, O. Kudashev, P. Nesterov, I. Sikorsky, F. Tereshchenko began their pilot activities in the city on the Dnieper.

House number 5 was remained in Pechers'k, at the Moscows'ka street. In this house the family of the famous pilot Petro Mykolayovych Nesterov (1887–1914) lived, on the house's wall the memorial plaque is posted. An elite of society met together in this house, there were discussions about aviation, discussions about literature, theater, music was heard from the gramophone. In Kyiv Syretsky airport Petro Nesterov with G.M. Neklyudov worked on the creation of his plane without a vertical plumage. He made at the Moscow plane "Newport – IV» his famous "loop" for the first time in the world. And in 1914 he together with his mechanic S. Rudenko flew to Odessa, Sevastopol, Moscow, St. Petersburg. Kyiv Governor presented him the golden token with which Mr. Nesterov did not part until his death. And he met his death in the Western Ukraine in 1914, during I World War near the village of Vola-Volots'ka, he shooting down with battering ram "back again" the plane of Austrian baron-pilot. There were not parachutes at that time – four pilots were dead. He was posthumously awarded the Order of St. George of IV degree. His children Margaret and Petro grew up in Kyiv. His remains was moved from Askoldova Mohyla to the cemetery of Lukianivka in 1939, where tombstone was found on the money of O. K. Antonov.

Fedir Tereshchenko from the family of famous oligarchs, that came from Hlukhov on Slobozhanshchyna, was the member of the Kyiv Society of Aeronautics, which was headed by Nestrerov. He studied at the Faculty of Mechanical of KPI, admired the construction of aircraft. In 1909 the family acquired the estate in Chervone village on Podill'a. Tsar Nicholas II visited this estate to learn the experience of building of the vehicles for aeronautics in the workshops of Tereshchenko for military purposes. Here in the heart of Ukraine in 1916–1917 aircraft series 1.7 "Tereshchenko" were constructed and flown. Fedir Tereshchenko has received a number of global patents, personally led the aircraft. To our days the palace, the park, the avia workshops are preserved in Chervone. And strange it seems that these monuments of our culture moved to the Moscow Patriarchate and nunnery is creating in the estate.

The pilot Kostyantyn Kostyantynovych Artseulov (1891–1980) was the member of the Kyiv Society of Aeronautics. He was born in Yalta in the family of an engineer-shipbuilder, he studied drawing, graduated from St. Petersburg Marine Corps, Kacza aviation military school, received the title of a military pilot. In the summer of 1916 at Kacza airport "mad ensign" first took shape of prohibited dangerous aerobatics – "spin" three times. He became a glider pilot, tested aircraft, was the first pilot of civil aircraft in aerial photography from 1927 to 1933 under the Soviet government. At the same time, this multi-faceted personality attended so glorious high art as book design, was a member of the Artists' Union. He Survived the exile and died in 1980.

Oleh Kostyantynovych Antonov (1906–1984) was born in Troitsy village in Podilskyi district in the family of an engineer. He made his first glider in the children's club, took part in Koktebel gliding competitions, received high awards. In the 24 years he has headed the design bureau in Tushynskiy airport, then headed the Novosibirsk branch of A. K. Yakovl'ev. Since 1952 he worked first in GCOKB-473, then in Kyiv mechanical factory, which was renamed OKB of the name of O. K. Antonova after his death in 1984. Gliders, multi-transport and passenger planes, including AN-2, AN-22 Antaeus, AN-122 Ruslan were created with the guidance of Antonov. Some of them constructes and operates today. The State noted its high merit by many awards.

Over 30 years Oleh Antonov lived in Kyiv, but memotial places must be more significant and have more architectural expression; in the Museum of NAU students and visitors should be able to see his personal things, paintings, sketches and drawings. While descendants are living – it must be done!

Serhiy Pavlovych Korol'ov (1906–1966) started his life in same year that Antonov in the Zhytomyr region in the family of the teachers. In the age of three he lived in Nizhyn, and in 1914 the family moved to Kyiv. He received two diplomas: one in Germany and one in the KPI, as well as diploma of Odessa profschool. In 17 years he has received a diploma for the project of glider K-5. In 1926 Serhiy Korol'ov entered and successfully finished the aeromechanical faculty of Bauman Institute (Moscow), he was the student of A. Tupol'ev. It is very hard work in the business aircraft building. Since 1931, he worked with F. Tsander. In 1937 he became the head of the office of missile devices, ...and then exile at Kolyma was. He as the designer has gone from glider aircraft to missiles. He was a world-class organizer, since 1946 he was appointed chief designer in NDI KB (Ballistic Missile Institute). In October of 1957 mankind applauded to the message about the withdrawal to the orbit of the artificial satellite of the earth of this KB, and in 1961 – Haharin's flight. He died still quite young in 1966 in Moscow.

Conclusion

Ukraine is proud of his son, his merits are marked by descendants: he was buried in the Kremlin walls, his monuments adorn cities, there is his museum in Zhytomyr, many streets, schools have his name.

This short essay does not allow adequately and fully reveal the depth, talent, global significance, historical heritage and value of Ukrainian aeries of the knights of world aviation and most accurate expression is phrasing from academic Volodymyr Vernadsky's diary: «You know, as dear Ukraine me and as deeply the Ukrainian revival gets to my national and own world view... I believe in the future.» (1945).

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