

A Swiss engineer in Anatolia

Born in the Levantine community of Smyrna, William Rudolf Cramer contributed to the development of eastern Anatolia.

Many Swiss expatriates are known to have distinguished themselves abroad in various fields. But there is little mention of our compatriots in post-Ottoman Turkey.

In 1805 the merchant HANS RUDOLF CRAMER (1774-1835) from Zurich married ERNESTINE WILHELMINE VON GONZENBACH (1784-1836) from Hauptwil (TG) whose family owned spinning workshops and maintained relations with the East. It was in this commercial context that their son JACOB CHRISTOPH (1816-1874) joined the Levantine community in Smyrna (Izmir) as a textile merchant. Of his five children, the last two sons, HERMANN RUDOLF (1857-1919) and HYPOLIT ROBERT (1861-1945) married the two half-sisters ANNA and SYLVIE, daughters of DR WILLIAM PIERRE CHASSEAUD of Smyrna. A descendant of a Huguenot family who took refuge in England following the revocation of the Edict of Nantes.

The Ottoman Empire, allied with Germany, was in full dissolution at the end of the First World War. The Treaty of Sèvres in 1920 granted the Greek kingdom large territories in Asia Minor and Eastern Thrace. This situation was unacceptable to the Turkish nationalists led by the republican soldier MUSTAFA KEMAL who continued his offensive for independence begun in 1919. In September 1922 a great fire particularly destroyed the Greek and Armenian quarters of Smyrna, the causes of which are still debated. This event ended the war and allowed MUSTAFA KEMAL to establish the Turkish Republic with the Treaty of Lausanne in 1923. But this period of unrest also strongly affected the Christian community, many of whom left the country.

The family of HYPOLIT ROBERT left Smyrna for Alexandria in Egypt. The Suez Canal crisis in 1956 subsequently encouraged further emigration, this time to Geneva in Switzerland – and where ROBERT, his great-grandson, distinguished himself as an environmentalist politician.

HERMANN RUDOLF's son, WILLIAM RUDOLF CRAMER (1896-1975), had followed a different path by choosing to study civil engineering at the University of London. Graduated as a structural engineer before the end of the First World War, he worked for 4 years for the aircraft manufacturer SHORT BROTHERS in Birmingham. At that time, aeronautical structures were still calculated as those of metal bridges.

Returning to Turkey, he took over for a while the local administration of the ABBOTT & CHARNAUD emery mine in Dip Sahrinj, near the town of Milas. The exploitation had the particularity of being very isolated and connected for the transport of the ore by a 12 km aerial cable. This activity served to familiarize him more with the Turkish language and mentality. Robbery was frequent at that time, and it was an opportunity for him to rub shoulders with the leader of the local band and to negotiate with him – on his honour – the protection of the company office which contained all the workers' pay. A strategy that served him several times thereafter.

In the late 1920s the young Turkish Republic began to develop infrastructure in Eastern Anatolia. It was on this occasion that WILLIAM CRAMER was commissioned by the Central Administration for the construction of the road linking Trabzon (Trebizond) on the Black Sea to Iran, as chief engineer. A 645 km road called *Transit Yolu* (transit road in Turkish) on a route steeped in history - described by XENOPHON

in his Anabasis 400 years before our era, and frequented by caravans coming from Asia following the "roads of silk".

The task was considerable. It was necessary to make drivable a rudimentary road – sometimes non-existent – passing through passes reaching 2430m in the Pontic Chain. Bridges had to be built. As heavy machinery did not exist, most of the initial work was done manually and with the help of horses. The macadam surfacing (non-bituminous) then required organizing a maintenance procedure.

The small team of Turkish engineers led by WILLIAM CRAMER followed the work, often camping on site. The workers were recruited from neighbouring villages and distributed in teams every 10 km. Team leaders were trained on site. This work required a lot of organization and travel in difficult terrain. It was also necessary to win the goodwill of official local authorities – but also sometimes rebels – as well as of the population. A good command of the language and knowledge of the mentality of the inhabitants was essential in the negotiations and in the sometimes adventurous circumstances encountered along the way.

The construction was completed in 18 years with the establishment of permanent maintenance teams and guarded refuges equipped with storm bells in winter on the passes.

In the mid-1940s, and in view of the growing importance of maritime trade in products from the Black Sea hinterland (coal, tobacco, hazelnuts, minerals, timber and potatoes), the Turkish government adopted a port construction plan. The only natural port was then that of Sinop. The others - unsheltered - were subject to sudden and often violent winter storms. The first construction approved was that of Trabzon.

The city has a considerable historical past, and owed much of its prosperity to the fact that the Romans conducted their military campaigns against Persia from this port. Vestiges of the port built by Emperor HADRIEN still exist as well as the walls and fortifications of the Genoese and Byzantine occupants who came later.

A small rudimentary dam still housed fishing boats, but it was now a question of providing the city with a port capable of accommodating the largest ships. The construction was put out to tender by the government in 1945, and the project presented by WILLIAM CRAMER – who had just completed his road mandate – and supported by three Turkish financiers from Istanbul won. The company was now called "RAR", an acronym for the names of the offices that financed the company.

At the end of the world war, heavy construction equipment was not easily accessible. And the task was at least comparable in magnitude to the construction of the large Alpine dams. The experience acquired during road construction was useful. Work began with the search for a stone quarry for the dykes, the organization of transport and the installation of infrastructure. It was also necessary to recruit locally and train the workforce. The exploitation of the quarry began without machines with transport by trucks. But the mechanization of the site was able to continue thereafter in collaboration with an English firm and the port was inaugurated in 1953.

The RAR company then undertook, in collaboration with two German firms, the construction of the port of Samsun. WILLIAM CRAMER assumed the administrative direction. But he resigned in 1955 in favour of an offer from the Ministry of Public Works in Ankara. As a civil engineering specialist he had the task of evaluating the port and railway works in progress in the country, and of providing reports to foreign development aid agencies.

Retired in 1971, he returned to the country, having left the lasting but little-known mark of a Swiss engineer in Turkey.

Noel William Cramer

Bibliography:

William Cramer, **CONSTRUCTION AND MAINTENANCE OF THE TREBIZOND-IRAN TRANSIT ROAD**, *The Structural Engineer*, May 1940 (Volume 18, Issue 5)
Article giving a detailed description of the transit road construction and maintenance system.

Sir Denis A.H. Wright, **TREBIZOND AND NORTH-EASTERN TURKEY**, *Journal of the Royal Central Asian Society*, Apr 1946 (DOI: 10.1080/03068374608731207 - ISBN: 0035-8789)

Very informative article about North Eastern Turkey and mentions the Trabzon – Erzurum transit route.

Robert Cramer, **LES CRAMER DE ZURICH 1363-2003**, Editions Familiales, 2004, ISBN: 2-9518638-1-0

Genealogy of the family established by Dr Robert Cramer, biologist at the Institut Curie (CNRS) Paris.

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Professional career of William Rudolf Cramer (1896-1975).

Studied civil engineering at the University of London.

1917-1921 Aviation and Buildings in England (Rochester and Birmingham)

1921-1927 Return to Turkey, administration of an emery mine near Milas.

1927-1945 Road works in Turkey for the Central Administration:

Construction of the Trabzon - Iran road, length 645 km. Duration 18 years.

Capacity: Chief Engineer.

1945-1953 Construction of Trabzon harbour:

Excavation, transport and placement of stone in the dykes with a length of 1250 m.
1,400,000 tons.

Concrete and masonry: 150,000 m³

Backfill: 250,000 m³

Dredging: 1,200,000 m³

Cost: 23,000,000 Turkish liras (approx. Sfrs. 150,000,000 in 2020)

Capacity: Chief Engineer and Site Manager.

Duration: 8 years. Completed in 1953.

Firms: Mitchell EnG. Group and RAR.

1953-1955 Construction of Samsun harbour:

Excavation, transport and placement of stone in the dykes with a length of 4500 m.
4,000,000 tons

Concrete: 200,000 m³

Backfill: 250,000 m³ approx.

Dredging: 5,000,000 m³

Cost: 70,000,000 Turkish Liras (approx. Sfrs. 440,000,000 in 2020)

Capacity: Director Administrator.

Firms: Philipp Holzmann and Hochtief, RAR.

1955 Resigned to accept offer from Ministry of Public Works

1955-1971 At the Ministry of Public Works as a specialist, Department of Railways and Harbors.

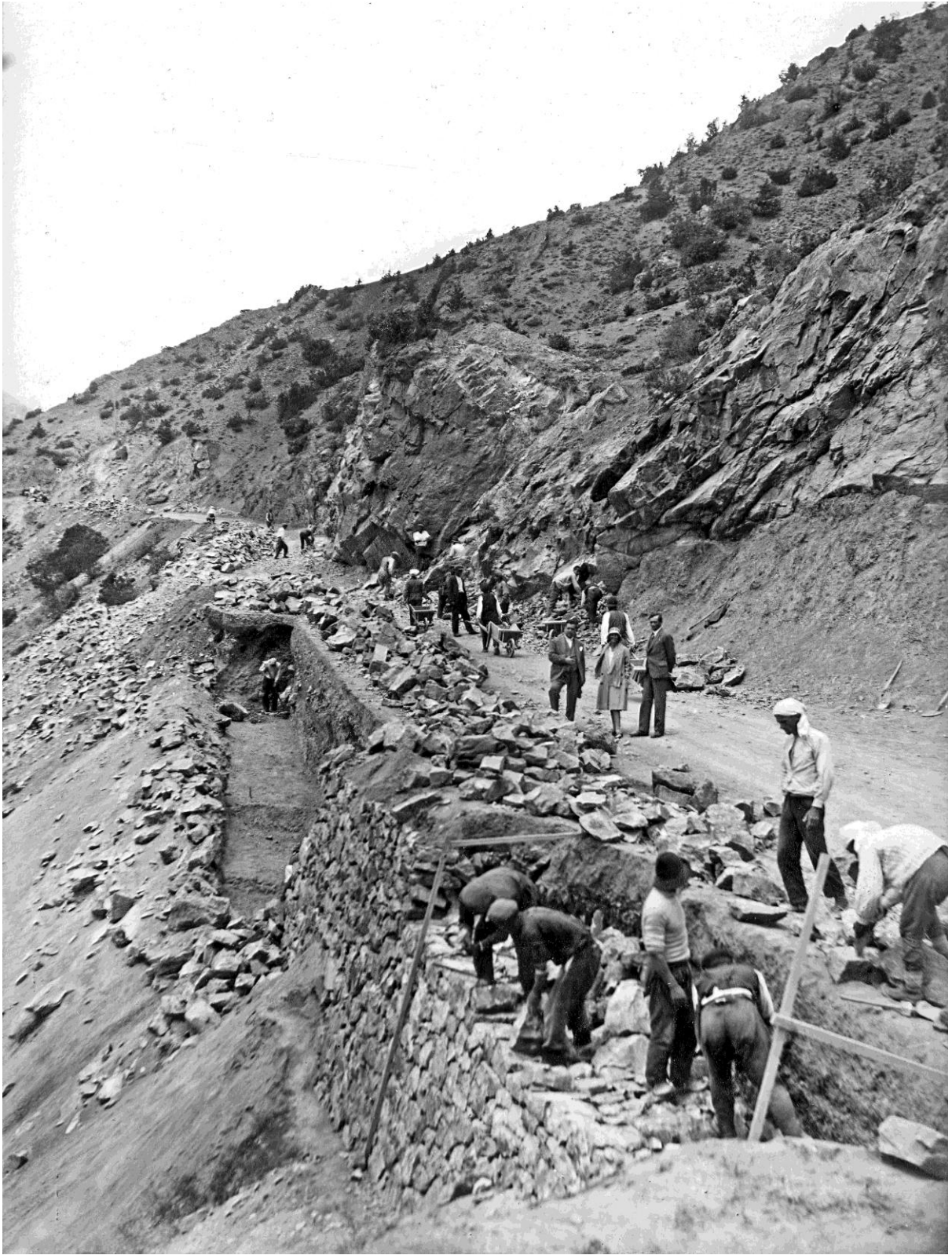
1971 Return to Switzerland.



William Cramer (ca. 1950).



The encampment of the transit road engineers. William Cramer (second from left) with his construction team leaders.



Road preparation.



Construction of one of the many bridges.



Overview of the port of Trabzon (Trebizond) in 1954.