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There were giants in the Earth in those days: the ancient catchment and aqueduct of “Triglio” near Taranto (Italy)

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In the area between the towns of Crispiano, Statte and Taranto, partly along the Gravina (canyon) of the Triglio, a huge aqueduct, which presently reaches Taranto, develops. The water intake apparatus, which is constituted by small underground tunnels some kilometers long and with regularly spaced pits for the digging and for the aeration of the conduct, is very notable. As a matter of fact, the water intake works deep inside very permeable calcareous rocks testify the capability of withdrawal water even from an unfriendly environment like a karst vadose zone in a semi-arid region.
The first part of the work is attributed at Roman age and more precisely in the interval between the 1st century BC and AC. In 950 A.D., after the fall of the Roman Empire, Nicephorus II Phocas, Emperor of the East, rebuilds Taranto after the wars and restructures the Triglio Aqueduct that remains outside the city walls. In 1334, Catherine II of Valois, Princess of Taranto, completes the aqueduct bringing it into the city. In the nineteenth century, the aqueduct becomes the "Public Source" and the Apulian Aqueduct Authority uses the structure to provide water until 1922, when the city began to be served by the Sele.
The aqueduct presently extends for about 12 km and can be divided into three parts: (1) water intake apparatus, hypogeum stretch for water interception, formed by branches of tunnels converging in a single pipe; (2) hypogeum conductor apparatus, which is a unique underground pipeline entirely excavated in the rock; (3) epigeum conductor apparatus, the final stretch of the aqueduct where it emerges from the ground level. The trend of the tunnels of the water intake apparatus has been reconstructed through studies carried out by Speleo Group Statte and other researchers. The water intake apparatus is composed by tunnels and pits excavated into a calcareous mass, draining the karst vadose zone and the alluvial deposits, where the tunnel is parallel to the water course of the canyon.
Based on the average climatic conditions, it was possible to estimate an uptake of the order of 20 l/s. The tunnels of the Triglio aqueduct develops, for the entire length, into two types of calcareous rock: the Calcarenite of Gravina and the Limestone of Altamura. The interception apparatus is developed almost entirely in the Calcarenite of Gravina, while the hypogeum conductor system is developed in both lithologies.
The attribution of the work to the Romans is not reflected in the purpose, as the port of Taranto was close to an area rich in springs. Moreover, the sophistication and the type of work recalls the “qanat” or “foggare” deriving from Persian, Arab or North African culture. it is therefore possible reposition the water intake apparatus as a work created by Arab hydrogeologists, which were in the southern Italy region around 900 AD.
More probably, aqueduct was for human and agricultural service of some settlement placed at an altitude of about 100-150 m above the sea level. Only later (1300 BC), the water of Triglio, excellent in quality, was brought to Taranto to substitute local polluted water. It is interesting to note that the aqueduct, thanks to the use of intercepted waters and not of water from an aquifer, perfectly worked almost 1000 years under several cycles of climate changes, the last of which, the little ice Age, ended in the area about 150 years ago.