Storia della nascita, declino e recupero delle gallerie inferiori dell'acquedotto Teresiano di Trieste

History of the origin, decline and recovery of the lower galleries of the Teresian aqueduct in Trieste

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RIASSUNTO

L'acquedotto Teresiano è stata la più importante fonte di approvvigionamento idrico della città di Trieste nel XVIII secolo. Rimasto in esercizio per circa 200 anni, è stato più volte rimaneggiato per aumentarne la produttività. Nel XX secolo, con l'avvento di nuove tecnologie di sollevamento, andò incontro ad un periodo di progressivo declino; fu prima convogliato in fognatura e poi ostruito in più parti a causa di maldestri interventi edili. Dal 2018 la Società Adriatica di Speleologia ha intrapreso un'importante opera di recupero che oggi permette di ripercorrere quasi 1500 metri di gallerie. Ad oggi i progetti intrapresi e volti a valorizzare l'acquedotto Teresiano comprendono un rilievo completo, la caratterizzazione degli strati di flysch e dell'acqua. In particolare quest'ultima è risultata priva di metalli pesanti e contaminata solo da batteri fecali, ma in concentrazione sufficientemente bassa da poterne ipotizzare un uso irriguo.

Parole chiave: acquedotto, captazione, recupero, Trieste, Impero Austro-Ungarico

EXTENDED ABSTRACT

During the 18th century, the city of Trieste experienced a significant increase in population due to renewed policies aimed at promoting trade. This rapid growth brought an urgent need to solve the city's water supply problem. Maria Theresa Empress of Austria ordered the construction of a new aqueduct near the city center, which, due to the area's geology, relied on the "captazione", a water collection technique. This method consists in digging long galleries into the flysch rock to intercept as many fractures as possible; the more fractures intercepted, the greater the amount of water collected, which would otherwise be lost underground. For the next 200 years, the aqueduct remained the primary source of fresh water for the city and underwent multiple expansions and structural changes , with the aim of improving its productivity. However, with the advent of modern technologies, it became possible to pump large amounts of water from distant springs, marking the decline of the Austro-Hungarian aqueduct. At the beginning of the 20th century, it was reclassified as an industrial aqueduct, and right before World War II, it was diverted into the sewer system. Between the 1960s and the 2000s, the aqueduct was used as a dump for construction waste and was obstructed by erroneous concrete pours, severely affecting the water flow and making access to the galleries impossible. Since 2018, some members of the Società Adriatica di Speleologia, through continuous and meticulous work, have removed the concrete obstructions, built a steel box structure to bypass the blockage caused by construction waste, and cleared a natural landslide, restoring full accessibility to almost 1500 meters of galleries. Some sections of the galleries had been isolated for over 50 years and revealed bacterial formations known as snoctiles, previously reported only in natural caves. The last extension of the lower galleries was excavated under the direction of Anton Tschebull in an attempt to pass the flysch barrier and reach the limestone, hoping to find large underground water reservoirs. Although this hope was not realized, today, at approximately 150 meters underground, we can observe the contact point between these two rock types. Finally, we present a complete map of the lower galleries and a preliminary assessment of the water quality, which shows that, as the galleries approach the urbanized area, the number of fecal bacteria increases while the amount of heavy metals remains negligible. While, in the limestone galleries, the water can still be considered nearly potable, in the spots with the highest bacteria contamination it is still sufficiently low to allow the use of the water for irrigation purposes. Reaching the Tschebull terminus marks the near completion

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