

## Bridge of Justinian (Sangarius Bridge)

The **Sangarius Bridge** or **Bridge of Justinian** (Turkish: *Justinianos Köprüsü* or *Beşköprü*) is a late Roman bridge over the river Sakarya (Latin: *Sangarius*) in Anatolia, in modern-day Turkey. It was built by the East Roman Emperor Justinian I (527-565 AD) to improve communications between the capital Constantinople and the eastern provinces of his empire. With a remarkable length of 430 m, the bridge was mentioned by several contemporary writers, and has been associated with a supposed project, first proposed by Pliny the Younger to Emperor Trajan,<sup>[1]</sup> to construct a navigable canal that would bypass the Bosphorus.

### Location and history

The Sangarius Bridge is located in northwestern Anatolia, in the ancient region of Bithynia, ca. 5 km from the town of Adapazarı Today, the bridge spans the small Çark Deresi stream (called Melas in Antiquity), which flows from the nearby Sapanca Lake; the modern course of the far wider Sakarya lies 3 km to the East.

In Antiquity and the Middle Ages, the bridge served an important purpose: it was the crossing-point of the strategically important military road from the Bosphorus to the eastern provinces of the Roman Empire, which were threatened by the Sassanid Empire. Before the stone bridge was constructed, a wooden pontoon bridge existed, which, according to Procopius, was frequently washed away when the river flooded, costing many men their lives.

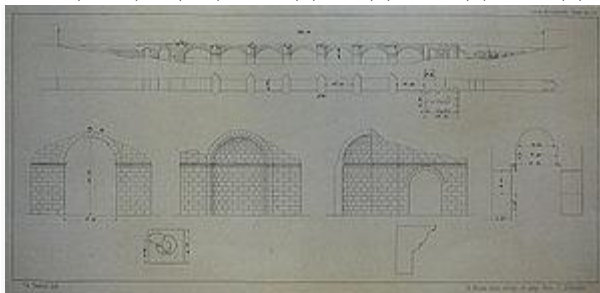
The date of construction for the stone bridge can be accurately determined from contemporary sources: two laudatory poems of Paul the Silentiary and Agathias, dating to the year 562, celebrate its completion, and the chronicler Theophanes records that the work began in *Anno Mundi* 6052, which corresponds to 559–560. Conversely, since Procopius states that the bridge was still under construction when he wrote his work on Justinian's building projects (*De Aedificiis*), this would mean that it was written in the years 560–561, five to six years later than earlier presumed. However, given that Theophanes' dating is somewhat inaccurate, it may well be that the bridge's construction had originally started in ca. 554.

### Construction

The bridge is built of blocks of limestone, and, including the abutments at each end, totals 429 m in length, with a width of 9.85 m and a height of up to 10 m. The bridge rests on seven main arches. The central five arches span ranges from 23 to 24.5 m, with the piers between them ca. 6 m thick. They are complemented on either side by a smaller arch with a span of ca. 20 m. The Çark Deresi stream flows through one of the western arches today. In addition, there are further five arches (two in the western and three in the eastern ends) of between 3 and 9 m on the banks of the river bed, which served as spillways in case the river overflowed. The eastern part of the bridge has been partially destroyed by the construction of a railway line along the river's course. The seven main piers were apparently decorated with small Christian crosses, which, with the exception of two, seem to have been destroyed.

In detail, the width of the main architectural elements (spans in **bold**, piers in parentheses) are, in meters:

**3** (N.A.) **7** (9.5) **19.5** (6) **23** (6) **24.5** (6) **24.5** (6) **24** (6) **24.5** (6) **20** (9.5) **9** (N.A.) **6** (N.A.) **3**



Sketch of the surviving sections of the bridge, including the now vanished triumphal arch in the western end, and the apse in the eastern end (1838)

The piers are shaped so as to act as cutwaters, rounded on the upstream and pointed on the downstream side. The only exception is the broadest pier on the western shore, which is wedge-shaped on both sides. This feature of the Sangarius bridge sets it apart from most known Roman bridges, which usually feature pointed cut-waters upstream, and - if existing - also downstream.<sup>[11]</sup>

On the western entrance a triumphal arch stood, while on the eastern side there are the remains of an apse, whose function is unclear, but possibly served as a religious shrine.<sup>[3]</sup> The apse features an East-oriented half-dome, and is 11 m high and 9 m wide.<sup>[12]</sup> The remains of the arch, now vanished, are illustrated in the sketches made in 1838 by Léon de Laborde: they depict an arched doorway, made of stone masonry, lying immediately at the entrance of the bridge.<sup>[13]</sup> The next sketch provides some measured dimensions: the doorway was 10.37 m high and 6.19 m wide, while the pillars to either side were 4.35 m thick.<sup>[14]</sup>

The bridge was also adorned by an inscription bearing an epigram by Agathias. The inscription has not survived, but its content has been preserved in the writings of Emperor Constantine VII Porphyrogenitus:

“ Thou too, along with proud Hesperia and the Median peoples and all barbarian hordes, Sangarios, whose tempestuous course is broken by these arches, thus by the sovereign's hand hast been enslaved. Once impassable by ships, once untamed, dost thou now lie in shackles of unbending stone.





**Reference:** Wikipedia, the free encyclopedia

## Longoz Acarlar

Coordinates:  41°7'4"N 30°33'16.002"E

**Longoz Acarlar**, located between Karasu and Kaynarca in the North of Sakarya, is the monolithic longoz of Turkey. Its extent is 250–1250 m and length is 7.5 km. In terms of forming, it is a typical lagoon. It is bordered with dune 20-25 high in TheBlack Sea region, low hills nearly 100m high in the South. It takes place 6 km away in the West of Sakarya.and much of water flows into Sakarya River via Okçu River.

There are 5 villages belonging to Karasu; Denizköy, Karamüezzinler, Üçoluk, Taşlıgeçit, Camitepe and 3 villages belonging to Kaynarca; Turnalı, Büyükyanık, Birlik around it. It was taken under preservation in 1998as the grade 1 site area with the decision taken by Bursa Cultural and Natural Heritage Organisation. Adapazarı Soil and Water Organisation turned the Okçu River as the outlet of the lake into the canal by extending it. Since then, its extent decreased nearly % 40(9443 km<sup>2</sup>)

Some kinds of plants and animals some of which are partly endemic live in this lake. It is the area especially for the passagers for semination and spending their winter. Ashes, Brazils, Beeches and Elms are some of common types in the forest.Leucojum aestivum, used for the treatment of the Poliomyelitis, is traded by the villagers living in Kaynarca. Catfish, Carps, roaches live in longoz and Boars, Weasels and Falcon live in the environment. Hottonia palustris, as an endemic kind in our country is found only in Lake Acarlar. Longoz was registered as a wetland area with the plan prepared in 2009.





**Reference:** Wikipedia, the free encyclopedia

## Poyrazlar Lake

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Lake Poyrazlar is located at 40° 50' N, 30° 27'E, 8 km northeast of Sakarya, Turkey. The lake, a protected area, is particularly popular among those going out for a picnic over the weekend. It is a wonderful getaway from the hustle and bustle of everyday city life -- a sanctuary of peace. This lake, whose water is drinkable, is surrounded with pine, oak, plum, fig and mulberry trees. Those who come here for a picnic or a day away from the city can enjoy the fresh plums right off the tree branches in addition to seeing many wild birds. And the marvelous water lilies on top of the lake make the visit to this location even more worthwhile.





**References:**

\*Wikipedia, the free encyclopedia