

WOODEN MOSQUES (ÇANDI/ÇANTI MOSQUES) FROM ANATOLIA'S BLACK SEA REGION

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Abstract: *Wood has been used in Turkish architecture, not only in houses and warehouse structures, but also intensively in the building of mosques. The mosques of the times were built in the wood masonry system and were especially abundant in regions of Anatolia that were blessed with generous forests. The Black Sea Region particularly abounds with wooden mosques. Known as çanti mosques, these structures represent the region's cultural wealth. The aim of this article is to describe the mosques built in the "wooden masonry system" (çanti), a group of buildings that together signify a special group of mosques in Anatolian architecture, referring to examples of these types of mosques located in the region of the Black Sea. The features of the plans, construction systems, materials and ornamentation of these structures will be detailed in an effort to document the identity of this collective cultural legacy and as a contribution to the literature for posterity.*

Key words: *wood, wooden mosques, Çanti mosques, Black Sea Region, Anatolia.*

1. Introduction

The history of the use of wood in Turkish architecture in addition to other materials in the building of mosques goes as far back as the Karahanid Era (840-1042). It is known that the Karahanids built wooden-columned and wooden-ceilinged mosques in the old cities of Turkistan such as in Samarkand, Bukhara and Hive [2]. The same tradition continued to be implemented in the era of the Ghaznevids (962-1186). The mosque commissioned by the Ghaznevid ruler Sultan Mahmut (998-

1030) in the eleventh century – Arus ül Felek Mosque – featured wooden columns [1]. Structures of this typology, known as "Wooden columned mosques," were a part of Anatolian Turkish Art and continued to be widely built in the times of the Seljuks (1077-1130) and in the 14th century in the Principalities Era. Mosques with wooden columns and wooden ceilings were constructed in many locations in Anatolia in the era of the Anatolian Seljuks, especially in Konya, Beyşehir, Kastamonu, Niğde, Ankara, and Afyon.

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Another group of wooden mosques in Turkish architecture began to be seen from the thirteenth century. These were built in the timber masonry construction system. Although the first examples of such mosques were seen in the time of the Seljuks, they began to proliferate in the Early Ottoman Era [7]. Becoming very widespread during the reign of Orhan Gazi in the Early Ottoman Era, these mosques appeal to the eye, both with their construction systems and their decorative wealth [4].

These mosques were built with timber joinery techniques that utilized nails. Although seen in Western Anatolia and the Marmara regions, these types of mosques were mostly constructed in the Black Sea Region, where forests were abundant. The Black Sea Region is an area of deep forests and intense precipitation. The area accounts for two-thirds of the forests in Anatolia and boasts of a rich diversity of trees, among which are linden, beech, chestnut, alder, oak, fir, yellow pine, black pine, spruce, mountain alder, and silver birch [8]. It was these trees that caused the region to adopt an architectural culture of wooden construction. Wood was widely used in the region for houses, granaries (*serander*, *çöten*), barns, bridges, and mosques. Although the entire Black Sea Region harbors a wealth of wooden mosques, the major cities of the area such as Samsun, Sinop, Kocaeli, Düzce, Kastamonu, Ordu, Giresun, Rize, Trabzon and, Artvin abound with numerous wooden mosques in both city centers and in the villages (Figure 1).



Fig. 1. *Map of the Black Sea (Google Earth)*

The first research on the wooden mosques of the region was carried out by the Turkish art and architecture historian Ekrem Hakkı Ayverdi. In his book, *Osmanlı Mimarisinin İlk Devri Ertuğrul, Osman, Orhan Gaaziler, Hüdavendigâr ve Yıldırım Beyazıt I 630-805 (1230-1402)* (The First Period of Ottoman Architecture), Ayverdi presents a myriad of information about the wooden mosques in the region of the Western Black Sea under the heading *Çandı (çantı) Mosques* [4]. Ayverdi defines *çantı* as a structure built from long logs interlocked by notches cut into the wood without using nails [3]. P.I. Kuniholm writes that the dendrochronological studies he carried out on samples taken from the wooden mosques of the Black Sea Region showed that the history of the region's mosques dates back to 1206 [12]. According to this, the oldest mosque in the region was Çarşamba Gökçeli Mosque, built in 1206, followed by Yayıncılar Village Şeyhhabil Mosque, erected in 1211 [16].

The people of the Black Sea Region refer to these mosques as “mosques without nails” (*Çivisiz camiler*) due to their construction technique. In the official literature however, the structures are known by the name Prof. Ayverdi gave them—*çandı (çantı) mosques* [4].

This paper seeks to describe examples in the Black Sea Region of a special group of

structures in Anatolian Turkish architecture—the mosques built in the *çandi/çanti* timber masonry construction system in terms of their plans, construction systems, materials, and decorative features.

2. Methods

This paper aims to describe examples in the Black Sea Region of a special group of structures in Anatolian Turkish architecture—the mosques built in the *çandi/çanti* timber masonry construction system in terms of their plans, construction systems, materials, and decorative features. The characteristics of the mosques will be described based on selected examples drawn from the region.

3. Construction Systems and Materials

The *çandi/çanti* timber masonry mosques are to be found abundantly in the major cities of the Black Sea Region—Samsun, Sinop, Kocaeli, Kastamonu, Ordu, Giresun, Rize, Trabzon, and Artvin—on the coastline as well as in the interior areas, in villages, towns and districts. Because of the topographical properties of the region, they have generally been placed on sloping land. Constructed in the *çandi/çanti* timber masonry system, these mosques usually rise up from a stone masonry foundation. The stone sub-basements of the structures are made of smooth cut freestone [11]. Some of the mosques however, have been set directly into the ground without a sub-basement.

The wood masonry walls are made by stacking, one on top of the other, wooden planks or logs of chestnut, oak, pine or Valonia oak (locally called *pelit*), generally having a thickness of 4-6 cm and a width

of 20-30 cm. Logs are sometimes used in the construction of the walls as well. The plank, chump or log is shaped with a large saw, and then these wooden parts (regionally *perde*) are notched and fitted on top of each other. They are joined together by one of two techniques. In the first system (called *fitilli-grooved*), a *fitil*, or groove, is etched into the hollow created between two pieces of wood. In the second system, the pieces of wood on top and below are hollowed slightly and joined together in an inverse V [11]. These pieces of wood (*perde*) are joined at the corners with a wooden joint technique that is known locally as *kurtboğazi* (wolf's throat) or *karaboğaz* (dark throat) (Figures 2 and 3) [9].

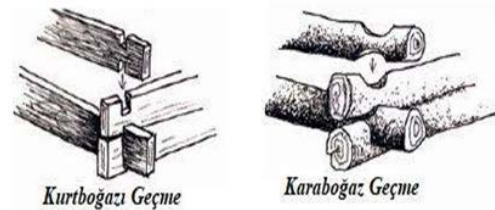
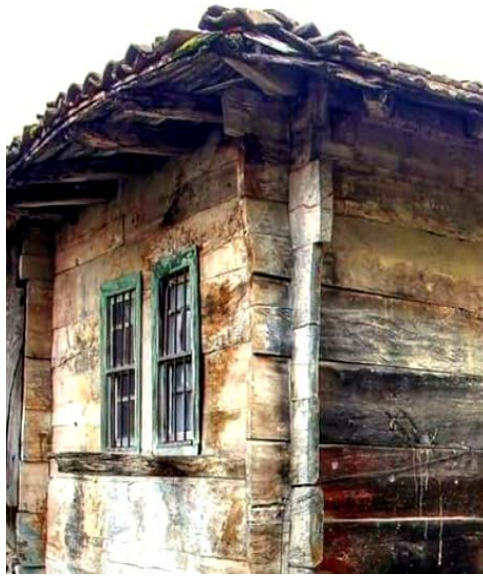


Fig. 2. *Kurtboğazi* and *Karaboğaz* interlocking techniques [14]

It is the *kurtboğazi* system that has usually been employed in the timber masonry (*çandi/çanti*) mosques of the Black Sea Region. No nails are used in this system. The interlocking *kurtboğazi* technique uses square-cut timber, where rectangular cavities are opened in two directions to allow for the top piece to fit into the lower one. When the wooden elements (*perde*) are too short, wooden logs cut short are inserted perpendicularly into the wall spaces. This way, the wooden pieces (*perde*) are joined through interlocking in both the corners and inside the spaces in the walls (Figures 4-6). All of the interior and exterior walls are

constructed using this technique. In the *karaboğazı* system, log walls are built by stacking the logs on top of each other inside the hollows created for them. Since

the mosques carry the same characteristics as the houses in the area, the structures may seem to be houses at first glance [6].



a)



b)

Fig. 3. *Çarşamba Göğceli Mosque*: a) Detail of the *kurtboğazı* interlocking technique, (Author); b) Detail of the *kurtboğazı* interlocking technique, Rize (Sinan Doğan)



Fig. 5. Examples of mosques built in the *kurtboğazı* interlocking technique. Right: Rize *Çamlıhemşin Şenköy (Omokta) Mosque* [6]



Fig. 6. A mosque built in the *kurtboğazı* interlocking technique. Rize *Hemşin Mosque* (Sinan Doğan)



Fig. 5. Examples of mosques built in the kurtboğazi interlocking technique. Right: Rize Çamlıhemşin Şenköy (Omokta) Mosque [6]



Fig. 6. A mosque built in the kurtboğazi interlocking technique. Rize Hemşin Mosque (Sinan Doğan)



a)



b)



c)



d)

Fig. 4. Examples of mosques built in the kurtboğazi interlocking technique: a) Rize Findıklı, Meyveli Village Mosque; b) Samsun Bekdemir Village Mosque (Sources: Rize Provincial Directorate of Culture and Tourism); c) Çarşamba Göğçeli Mosque (Source: Samsun Provincial Directorate of Culture and Tourism); d) Samsun Kavak Kasımzade Ahmet Sofi Mosque (Sinan Doğan)

The covering system of these mosques includes the *rewaq* on the outside and consists of a wide eaved hipped roof covered with brick in the Turkish style, locally called *dört omuz çatı* (a four-shouldered roof). There are also rare examples in the region of roofs covered with thin slices of wood locally called *hartama*. The roofs generally cover flat ceilings. Sometimes there is a central molding in the ceiling (Figure 7).

There are others that have a hidden interior dome called *çarpuşta* (Figure 8). In rare examples, the structure is completely covered with a dome. Both kinds of dome are constructed in the *bağdadi* technique.



Fig. 7. Molding in a flat ceiling. Trabzon Arsin Güneyce Village Mosque (Author)

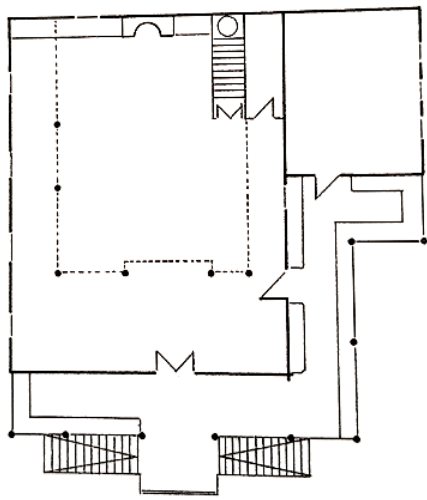


Fig. 8. The hidden dome called *çarpuşta*. Artvin Borçka Maral Village İremi Mosque (Author)

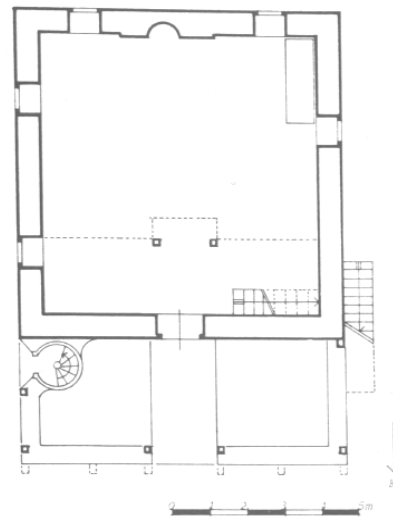
4. Characteristics of the Plan

The floor organization of *çanti* (timber masonry) mosques is in the form of a single or two-story, rarely a three-story, structure with or without a sub-basement. In two- or three-story examples, the ground floor is used as a madrasah. Sometimes the madrasahs are situated

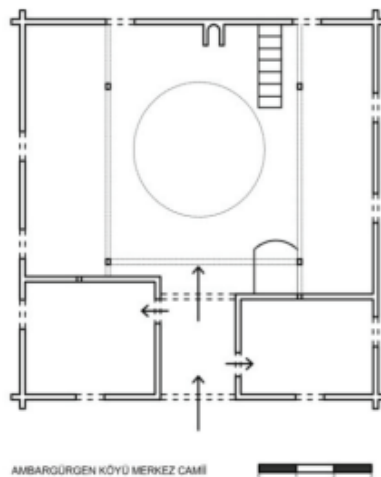
beside the mosque as a separate building [16]. The mosques are on a north-south axis and consist of a square or nearly square *harim* (praying hall) and a *rewaq*. The dimensions of the *harim* (praying hall) vary but are usually an average of 4x7 m by 6x9 m. *Harim* areas can also be smaller or larger.



a) The *rewaq* surrounding the *harim* on one side (*hayat*), Dernekpazarı Kondu Mosque [11];



b) The *rewaq* surrounding the *harim* on two sides, Rize Hemşin Bilenköy (Tepan) Mosque [6];



c) Rooms on either side of the entrance, Ordu Ambargürgen Village Central Mosque ([13], Figure 2)

Fig. 9. Characteristics of the plan

The *rewaq* surrounding the *harim* is sometimes in front of the building, sometimes occupying three sides—the front and both sides of the structure (Figure 9a). In some examples the *rewaq* wraps around the structure in the shape of an L. The *rewaq* on the north is bigger and is used as a latecomers' portico. As in houses, the *rewaq* over looks the landscape [10]. Again as in the houses, this area is called *hayat* (Figure 9b, 6). The *rewaqs* are carried by wooden posts. The width of the side *rewaqs* is usually about 2 m while the front *rewaq* (latecomers' portico) is 3 m. The latecomers' portico is sometimes a covered space. Sometimes there can be *hodja* rooms on both sides of the entrance, or rooms dedicated to Koran courses or to an additional room that functions as a women's gallery (Figure 9c). A single minaret rises from one corner of these mosques.

The entrance into the *harim*, or the prayer hall, is usually through a single-leaf wooden door that is situated in the middle of the north side of the mosque.



Fig. 10. The women's gallery surrounding the *harim* on 3 sides. Samsun Kavak Bekdemir Village Mosque [6]

The mosque can sometimes be accessed from the east or west side of the building. The prayer hall is surrounded by a women's gallery, sometimes on one side, sometimes on two, sometimes in the shape of a U, and sometimes situated on four sides. The women's gallery can also appear only on one side above the entrance. The gallery is supported by wooded columns or posts. There are other sections in the prayer hall besides the women's gallery.

A mihrab stands right at the center of the qiblah wall. Mihrabs are usually of wood but there are rare examples made of stone. Wooden mihrabs are made from walnut wood. Mihrabs are generally in the form of a recessed niche, but there are rare examples of those that project outward toward the *harim* or prayer hall. On the right of the mihrab, on the west corner, is the minbar, and on the left is the raised lectern. The lectern is sometimes adjacent to the southeast side of the mosque.



Fig. 11. The women's gallery surrounding the *harim* on 3 sides. Artvin Camili Mosque (Sinan Doğan)



Fig. 12. The mihrab, minbar and the muezzin's section. Artvin Camili Mosque (Sinan Doğan)



Fig. 13. Mihrab and minbar. Rize Şimşirli Village Mosque (Sinan Doğan)

The spatial arrangement in these mosques is based on two-story facades. The windows illuminating the *harim* have been designed as two-tiered (Figures 10-13). Windows are rectangular at a ratio of usually 1:2. The windows have wooden frames.

5. Decorative Features

Built in the provinces and districts by the high-level administrators and foundation owners of the day, these mosques, when viewed from the outside, looked quite simple and modest, but their interiors were very decorative and exhibited a high scale of wood workmanship. The sections that carried interior decorative elements were the main doors, the mihrab, minbar, lectern, ceilings, ceiling central moldings, the banisters of the galleries, the gallery projections, gallery (*mahfil*) columns, *mahfil* kiosks (balconies), the *rewaq* banisters and columns. The entrances to the mosques are also of importance.

It can be seen that classic Ottoman techniques come to the fore in province and district examples, but in rural areas, vernacular practices are dominant, giving way to a rich program of ornamentation. In terms of technique, these mosques

boast of stone, wood, *kalemişi*, and metal decorations.

Stone decorations are usually in the door frames and in the stone mihrabs. However, wood decorations are prominent and can be seen in the door wings, the minbar, mihrab, lectern, ceilings, columns, galleries (*mahfil*), and stairs. The woodworking techniques used are engravings, reliefs, lathing, and openwork. In the engraving technique, the motifs in the composition are surrounded by deep grooves so that the pattern emerges as a relief. In the openwork wood technique, geometrical motifs can be seen of overlapping squares, polygonal shapes, circles, parallel, straight and bent lines, zig-zags, stars, bands, wavy lines, loops, braid motifs, basketweaves, chevrons, and pendants [6]. Naturalist decorations are dominant in the openwork and engraving techniques. Among these are stylized vegetative motifs, the Tree of Life, cypress trees, flowers, tulips, upside-down tulips, lotuses, leafy and bending branches, and panels with vases and amphoras full of flowers [11]. Other motifs used are rosettes, the crescent and star, clocks, flags, daggers, swords, *zulfiqar*, ewers, ships, scales, plates of fruit, birds, the wheel of fortune, the stamp of Süleyman,

muquarnas, tassels as well as national and symbolic themes [10]. Decorative depictions also included landscapes, scenery, kiosks, mosques, and minarets [11]. In the ones most recently built, Baroque elements comprised of S-C curvatures and compositions of bouquets tied in the middle could also be seen. The designs either appeared as independent representations or in a composition on a panel, border or inside a cartouche.

Another technique employed in the decorative program of these mosques was decorative embroidery and colorful *kalemişi* ornamentation made using the red dye obtained from the madder plant. *Kalemişi* was applied to the wooden mihrab, minbar and ceilings as well as to the inscriptions on the interior dome; these were in the form of vegetative patterns and various wall depictions. *Kalemişi* can also be seen in cartouches, borders, and in the circular Koranic verses and prayers [16].

Appearing to be quite simple from the exterior, the single decorative element on the facades of the mosques were the ornamentations on the main entrance doors, the rewaq banisters and buttresses (Figures 14 and 15). Inside the prayer hall (harim), the architectural elements exhibiting the most prominent plastic effect are the mihrab and the minbar [15]. The wooden mihrabs of the mosques in the region are usually made from walnut wood. Mihrabs are generally in the form of a recessed niche, but there are rare examples of those that project outward toward the harim or prayer hall. The niches and sides of the mihrabs have been designated as areas for decoration (Figures 10-13). These decorations on the minbars take the form of carvings, reliefs and openwork woodworking (Figure 16). The wood of some of the minbars have been painted over with red dye from the madder plant (Figures 8 and 16).



Fig. 14. Example of decorative entrance doors. Samsun Kavak Bekdemir Village Mosque
(Source: Kavak District Governorship)



Fig. 15. *Side Below and Above: Rewaq banister and floor decorations* [6]

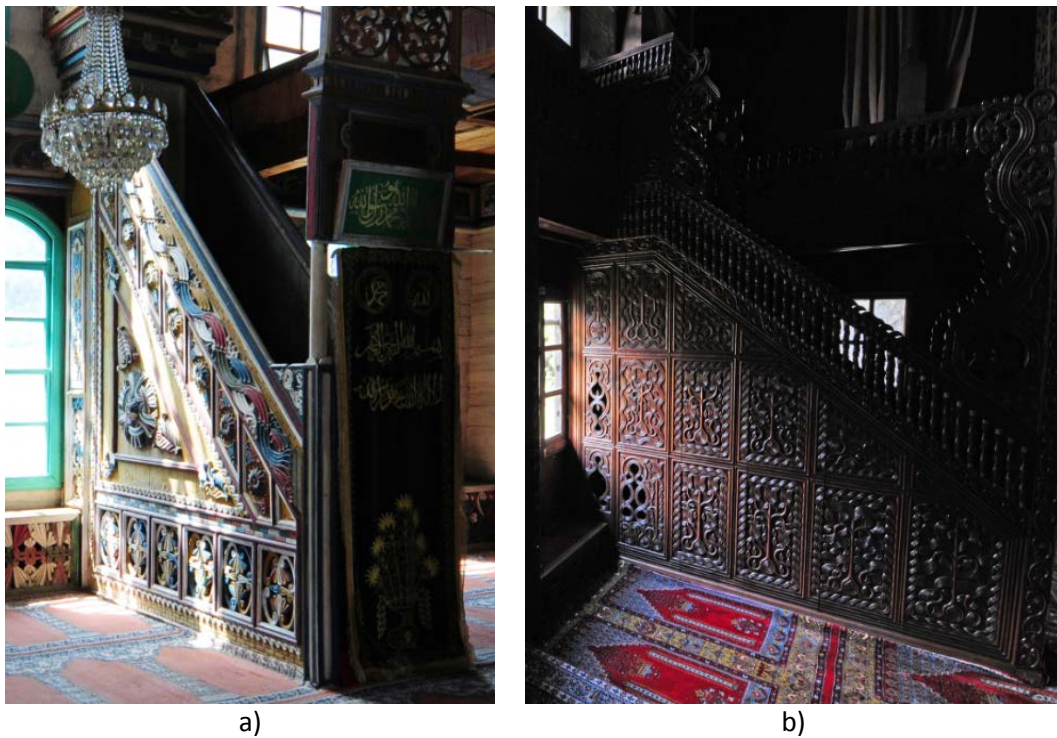


Fig. 16. *An example of a minbar where carvings and reliefs have been used together:*
a) *Rize Şimşirli Village Mosque Mihrab and Minber (Sinan Doğan);*
b) *Artvin Camili Mosque Mihrab (Sinan Doğan)*

The harim, or prayer hall, sections of these wood masonry (*çandi/çanti*) mosques also have intensive patterns on the ceilings, another area used for

decoration. The central moldings of the flat ceilings carry carvings, reliefs, lathing and openwork technique (Figure 17). Another kind of decorative element used in the ceilings was *kalemişi* (Figures 8, 9, and 11) The banister of the gallery and the columns of the women's gallery are other areas of decoration inside the harim (prayer hall) (Figures 18, 19 and, 20).



Fig. 17. *Rize Şimşirli Village Mosque Ceiling Molding* (Sinan Doğan)



Fig. 18. *Rize Şimşirli Village Mosque Gallery Banister* (Sinan Doğan)



Fig. 19. *Artvin Camili Mosque Gallery Kiosk Banister detail* (Sinan Doğan)



a)



b)

Fig. 20. *Decorated wooden column: a) Rize Hemşin Bilenköy (Tepan) Mosque gallery columns [6]; b) Samsun Göğceli Mosque gallery column* (Sinan Doğan)

6. Conclusion

The mosques built in the wooden masonry (*çandi/çanti*) technique, known to exist in Anatolia since the thirteenth century, were constructed with vernacular features that considered the topography, climate, materials, and orientation of the environment and the physical characteristics of the region they were a part of. These structures were unique in terms of decorative elements and they occupy a distinct place in Anatolian Turkish architecture.

It is a shame that today, only the examples built in the eighteenth century are standing and only a few of their master builders are known by name. The well-known Turkish Art Historian Haşim Karpuz relates that most of these masters came from the area of Artvin-Hopa. Karpuz says that some of the builders came from outside the region and were part of a group of builders known as "traveling builders" [10, 12]. The similarity in the construction techniques and decorative repertoire of the mosques supports this assertion. The village folk reveal that these mosques were built by woodworkers who had come in from neighboring Georgia. Some of the mosques were constructed by local masters.

The motif repertoire of the mosques includes Turkish-Ottoman motifs as well as Georgian Medieval Christianity iconology and some motifs frequently seen in Eastern Christian stonework (braids, two- and four-band braiding, basketweave, *yürüyen sekiz* (walking eight) can be explained by the interactions between masters but also gives credence to the view that the master buildings did in fact come from Georgia [5]). Various

researchers attribute the similarities to their being the production of an art school that encompassed the Eastern Black Sea Region and Acara/Georgia in the 19th century [5].

These structures not only represent the cultural assets of the region, but are also at the center of cultural tourism. Due to the challenges posed by their maintenance, some of them have been demolished and replaced by large concrete mosques. It is of vital importance that these mosques are registered, preserved, and restored. As assets that reflect the cultural heritage of the country, they should at the same time be documented and transferred to future generations.

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