

THE PERISTYLE
CONSERVATION-
RESTORATION
WORKS



On the occasion of the exhibition about the second phase of the conservation-restoration treatment of the Peristyle

Ivan Kuret, Mayor of Split

At the turn of the millennium, Split marked seventeen centuries of existence by redoubling its activities on the renovation of the historical core. One of the most important conservation-restoration projects launched in the last few years, and certainly to the citizens of Split the most interesting, is the undertaking of the integral renovation and presentation of the Peristyle.

This square in which the historical strata of the origin and development of the city can best be seen has become a symbol of the city and its greatest tourist attraction. It forms the finest backdrop for cultural events, as well as being a theatre for the life of the city.

I am personally delighted that both the professional and the general public, which is traditionally extremely severe and critical, have assessed the results of the first phase of the works on the cleaning, conservation and presentation of the architecture of the Peristyle as outstandingly successful.

The second, still more demanding phase, has confirmed the high standards set at that time. By now it is already possible to sense what the Peristyle is going to look like when the whole project has been completed.

The final results will, I am convinced, increase even more the interest in Diocletian's Palace, which, together with the historical nucleus of the city, has been inscribed on the World Heritage List. It will be a spur to the high quality conclusion of other projects renovating the historical core that are underway, and for the beginning of new endeavours.

For this I would like on this occasion to express my gratitude to all who have by their financial support ensured that the renovation of the Peristyle has unfolded according to plan as well as to the professional institutions and individuals who have made a contribution to this achievement.

Facing page photograph: Northern part of the eastern colonnade after the conservation-restoration operation

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The Project of the Integrated Restoration and Presentation of the Peristyle

Goran Nikšić, MA., Head of the Agency for the Historic Core, City of Split

The centre and by far the grandest part of Dicoletian's Palace, the Peristyle, long ago became the heart of the city to which it had given rise. At the beginning of the third millennium, after seventeen centuries of rebuilding, of enrichment with new styles and important contents of a religious and secular nature and also after a great deal of damage inflicted on it and continuing deterioration, the time had come for renovation that would restore glory and dignity to this most valuable complex in the city of which it is a symbol.

In the last two centuries conservation operation has followed conservation operation in this little area, at various levels, and with various effects. In the 19th century it was efforts aimed at purging the area around the cathedral that dominated, the object being to bring out the ancient buildings more. At that time, the Chapel of St Barbara was removed from the arch in the entrance of the portico of the Decumanus to the east of the Peristyle. From the area between the columns of the eastern colonnade, a house which housed the Al Tempio Café was taken away. Then, in the shadow of the largest restoration operation in Split, the reconstruction of the cathedral bell tower, a partial restoration of the eastern colonnade was carried out; the damaged columns were reinforced, and the upper parts of the construction were taken down and then reassembled. In the Protyron, a grand portico in front of the one-time entrance into the imperial quarters, conservation operations were carried out several times. The stone blocks of the gable were joined with metal clamps, the wall that closed off the central arch was partially torn down, the roof of the portico was renovated, as were the side chapels which only just avoided being demolished when the entrance into the substruction was re-established.

It was to do with this passage, which was on several occasions closed and opened up again, that the most dramatic changes to the Peristyle occurred. The podium that had for centuries served as a stage for the city's life, together with the stone balustrade that adorned it, was the centre of the composition of that most theatrical part of the cityscape. Without old photographs, it would be hard to imagine that at one time the colossal figure of Meštrović's Gregory of Nin occupied this space. The floor of the Peristyle acquired a completely new character when the pavement was dropped to the hypothetical original level.

On the western side of the Peristyle, the upper, Renaissance floor of the Cipci-Grisogono Palace, showing the hand of Niccolo di Giovanni, was reconstructed. The next-door Grisogono Palace, in the interior of which painted wooden ceilings of the 15th century were found and restored, had the stucco on the elevation preserved, which was a precedent in conservation practice, in which decrepit plaster would until that time be replaced.

On the northern side of the square a modern building was put up, with a glazed ground floor, on the site of a house that had been demolished in the wartime aerial bombardment, an exceptional example of the reconstruction of the city tissue, in contrast to the usual "clearing" of ruins.

The abundance and importance of these conservation and restoration operations show that the Peristyle was always at the focus of professional and public interest. These piecemeal operations did solve some issues, but sometimes they would also create new problems. Today we are witnessing a major project that for the first time is looking at the area as a whole.

Photograph on the facing page: SW corner of the Peristyle, condition before the works.

Spurred by initial funding from a private donation from abroad, from the Antiqua foundation, via the World Monuments Fund, with additional financial aid from the Split Municipal Authority and the Ministry of Culture, an operation that was at first conceived only as a cleaning operation on the ancient stone architecture developed into a complex conservation-restoration job that was to encompass all the segments, from the rehabilitation of the foundations, the cleaning and the conservation of the stone, mortar and plaster and other materials, to the ultimate presentation of the multi-layered monument.

Because of the significance of the Peristyle, the most important part of the historical nucleus of Split, which has been placed on the World Heritage List, and because of the complexity of the conservation issues, and the involvement of numerous foreign and domestic experts and institutions, the project constitutes one of the most important conservation and restoration operations ever carried out in Croatia. This is an outstanding opportunity for young experts to gain hands-on experience in the most contemporary conservation and restoration procedures.

At the initiative of the Agency for the Historic Core of the Municipal Authority of Split in 2002 an expert committee was convened, after which it set the framework for the conservation and restoration operations. Together with representatives of the Split Conservation Department of the Ministry of Culture, experts from the Florentine restoration institute Opificio delle Pietre Dure were brought in, as well as members of the Croatian Conservation Institute, which in 2003 started off extensive preparations for the conservation and restoration operation.

It was decided that the first phase of the works, by way of a pilot project, would cover the northern part of the eastern colonnade of the Peristyle. Here, after detailed architectural and photographic documentation of the current state, pursuant to contemporary non-destructive testing techniques (thermography, magnetometry, laboratory testing), a methodology was fixed on according to the highest international standards that was to

be applied to the remainder of the operation, which because of its scope and complexity has been split into a number of phases.

Apart from it being seldom possible to see such thoroughly-prepared conservation and restoration operations in this country, the first phase of the works on the Peristyle that unfolded during 2004 and 2005 is very particular in that it was one of the first projects in Croatia in which the basic stone cleaning procedure used was the most contemporary method of laser cleaning.

From a general conservation aspect, the first phase of the works on the Peristyle achieved a multiple effect: apart from centuries of soiling that uglified and damaged the stone being removed on part of the antique colonnade, the public was made keenly aware of problems that had to that time been considered only by a narrow circle of experts. This was contributed to by the exhibition put on by the Croatian Conservation Institute as well as by the media attention that was partially responsible for activities that had disfigured or even physically damaged this very important historical space being removed or at least toned down. Today the Peristyle has been rid of inappropriate café tables and parasols, and the sets of theatrical performances that tended to mask the Peristyle and render normal movement round the square impossible during the tourist season were reduced to the minimum.

Phase 2 of the works, which took place in 2006 and 2007, involved the façade of the Skočibučić-Lukaris Palace in the south western corner of the Peristyle. In this very important architectural complex that, as well as the ancient colonnade encompassed by the eastern façade, contains Romanesque, Gothic, Renaissance and Baroque parts, a new Museum of Ecclesiastical Art will be set up, in which the precious works from the treasury of Split Cathedral and other churches in the archdiocese will be put on show.

Methods that were tried and tested in the first phase of works were used in the conservation-restoration works on the façade of the Skočibučić-Lukaris Palace. Here, however, the situation was much more tricky, because



Photograph: Detail of the façade of the Skočibučić-Lukaris Palace, the condition before the conservation-restoration operation

as well as limestone and granite, plaster also appeared on the façade, and its as-found condition was fairly poor.

As well as the sources of funding already mentioned, in this phase of the project the American Express Foundation joined in with a large donation. Because of the great extent of the works and the demanding deadlines, some of the operations were carried out in two shifts. It can be said that after the scaffolding was taken down in early summer 2007, both experts and the general public were extremely well pleased, even more so

than after the close of Phase 1. The excellent results were achieved primarily through the efforts of the restorers, with the support of the Agency for the Historic Core and the Split Conservation Department. This kind of interdisciplinary and inter-institutional collaboration will be the foundation for successfully pulling off further phases of the project for the integral restoration and presentation of the Peristyle, already an indispensable point of reference, in which high conservation standards were set for the Split historical nucleus, as well as for the wider area.



Top photograph: Detail of the architrave of the portal in the ground floor of the Grisogono-Cipci Palace, condition before the operation

Bottom photograph: Same detail, after laser cleaning



Introduction

Ferdinand Meder, Director of the Croatian Conservation Institute (Hrvatski restauratorski zavod)

The Peristyle of Diocletian's Palace in Split is an epitome of the monumental properties of an architectural heritage of the very highest worth. At the same time, however, it is a proving ground on which numerous issues concerned with its conservation, restoration and presentation for the sake of lasting preservation have been thrown into relief.

Hence from the very beginning great attention has been devoted in the Croatian Conservation Institute to the project for putting the Peristyle in order, from the points of view of both organisation and professional expertise.

Because of all the complexity involved in the conservation and restoration of the Peristyle as an integrated whole, experts who have made reputations as specialists in individual issues of diagnosis of the condition and proposals for restoration works were engaged. At the same time, for the documentation of the state of affairs and the actual conservation treatment, teams were set up composed of well-experienced and of just-graduated experts, from whom a very respectable team has already been created, capable of resolving the exceptional complex issues involved in protecting and putting in order the stone assemblages of architectural and decorative plastic.

With this exhibition and publication, we wish to mark the finishing works of the second phase of the renovation of the Peristyle, which has covered the southern part of the western colonnade, including the elevation of the Skočibučić-Lukaris Palace, extended to the ground floor façade of the Grisogono-Cipci Palace, today belonging to the Luxor Café.

The Peristyle conservation operations began on the northern part of the eastern colonnade, and the continuation on the opposite side was motivated by wish to make ready the Skočibučić-Lukaris Palace for its future use as home for the Museum of Ecclesiastical Art.

Since the body of the palace comprehends part of the colonnade of the Peristyle, which has in fact been incorporated into the façade, the conservation works conducted were based on the experience acquired and tested out during the first renovation phase, with a substantial expansion through treatment of the characteristic elements of the palace's elevation: the portal and other entrances, the windows, plastered surfaces and in particularly the projecting balcony on the second floor.

Everything that from the point of view of the discipline was discovered in situ and undertaken to conserve the façade of the palace, including the colonnade, is shown at the exhibition and explained in detail in the other articles in the publication.

Now that this second phase of the conservation of the Peristyle has also been successfully brought to a close, we would like to express our thanks for the understanding, confidence and financial support of the Split Municipal Authority, the Ministry of Culture of the Republic of Croatia and foreign partners: World Monuments Fund, Antiqua Foundation and American Express Foundation, and in particular, for their outstanding collaboration, the Agency for the Historic Core of the city of Split headed by Goran Nikšić, MA.





Conservation-Restoration works on the façade of the Skočibučić-Lukaris Palace

Marin Barišić, leader of the Stone Sculpture Department

Tonči Borovac, leader of the Wall Painting Section

Sagita Mirjam Sunara, project conservation-restoration documentalist

At the beginning of the conservation-restoration works on the Peristyle, as well as the procedures and materials that would be applied, it was necessary to define the spatial scope of the operation. The Peristyle is not just the narrow space defined by the colonnades to the east and west and the Protyron on the south. Rather, it is a complex architectural unit that includes the buildings around the square, the vaults of the ancient porticoes that original stretched along the Decumanus, and in the vicinity is the forecourt of the cathedral, once the emperor's mausoleum with the periptery. In the north east, this unit is completed by the Chapel of St Roche, and in the south west by the elevation of the Grisogono Palace.

Because of the great extent of the zone covered, then, the project for conservation and restoration, that is, the rehabilitation and conservation works on the Peristyle, had to be divided into a number of phases, each one of them corresponding to one segment of the space. These comprise: the north and south part of the eastern colonnade; the northern part of the western colonnade with the elevation of the Grisogono-Cipci Palace; the southern part of the western colonnade with the Skočibučić-Lukaris Palace; the Protyron, with the passage off towards the Vestibule; the Chapel of St Roche with the arch

of the ancient portico along the Decumanus; and the remains of the arches of the ancient portico in the ground floor of the Grisogono Palace in the north west corner of the Peristyle, thoroughly restored a few years ago.

In the first phase of the project, which encompassed the northern part of the eastern colonnade, there was detailed consideration of and then a determination of the procedures and materials to be used in the conservation-restoration works on all the stone areas of the Peristyle. However, each segment of the Peristyle is specific in the issues involved in conservation-restoration procedures. This particularly holds true for the western colonnade of the Peristyle, an area of very marked historical complexity.

During the 1700 years of continuous use of the Palace for living in, buildings from later periods were interpolated into its fabric. A situation of this nature requires the finding of new solutions and the application of methods different to those that restorers have used to date.

The first step in the execution of any conservation-restoration procedure is a precise diagnosis of the as-found situation, that is, the determination of the scope and degree of damage, the identification of the causes behind the damage.

Photograph on previous pages: Capital of the portal in the ground floor of the Skočibučić-Lukaris Palace, the condition before the operation

Facing page photograph: Laser cleaning of the portal of the palace

On the stone areas of the Peristyle we encounter several types of damage and soiling:
1) inorganic soiling (black crust, dark sediments);

2) organic soiling (biological growths);

3) erosion of the surface layer of the stone;

4) damaged caused by soluble salts;

5) damage caused by metal corrosion;

6) inappropriate materials used in earlier operations;

7) structural damage caused by various kinds of human action.

These causative agents were described in detail and illustrated in the first exhibition concerning the conservation-restoration works on the Peristyle held in November 2005.

Here we merely list them: position of the building (vicinity of the sea, closeness of industry); climatic conditions; exposure of prominent portions of the building to the action of rainfall; biological colonisation of the stone surfaces and the areas between the structural elements; the use of the wrong materials in earlier conservation operations

(such as iron and Portland cement); atmospheric pollution and destructive human activities.

The objective of a conservation-restoration operation is to eliminate the cause of the deterioration and repair the damage. As pointed out earlier, the methodology was adopted during the first phase of the operations: organic and inorganic soiling is removed from the surface of the stone; deleterious salts are drawn out of the structure of the stone; iron elements anchored in the stone are extracted and where necessary replaced with new elements of stainless metal; the cement in the bonds between the stone blocks is replaced with acrylic-lime mortar; cement patches are removed; structural damage is reconstructed with suitable materials; unstable parts of the stone surfaces are consolidated; the upper surfaces of prominent parts are plastered so as to provide an appropriate pitch for drainage of rain water; at the very end, suitable surface-protection preparations are applied to the stone.





Since the first stage of Peristyle operations covered the corner pylon with pilaster and the first two columns of the eastern colonnade, it was to be expected that the operations would continue on the extension. However, because of the planned refurbishment of the interior of the Skočibučić-Lukaris Palace for the purposes of housing the Museum of Ecclesiastical Art, the initial plan was modified, and it was decided to relocate the centre of operations to the south west corner of the Peristyle. While the necessary documentation for implementing the project was being prepared, restorers of the stone sculpting section of the Split department of the Croatian Conservation Institute started, in the summer of 2006, to carry out works somewhat more to the south, on the ground floor of Grisogono-Cipci Palace (Luxor Café). The start of the works on the Skočibučić-Lukaris Palace, was marked by the erection of a working scaffolding at the end of August 2006.

In the area that is today defined by Ilirska akademija ulica [street] on the south, the Vestibule and Peristyle on the east, and Kraj Sv. Ivana on the north, and the internal courtyard on the western side, there is a complex of building comprising two parts: two houses to the south, and a medieval palace to the north. Like many of the other buildings, the Skočibučić-Lukaris Palace was not integrally designed by a single architect or constructed to such a plan. Rather, it was created by the joining and extension of several buildings in different ages. In the earliest phase of construction, the Romanesque, the elevation of the assembly “made its way in” between the columns of the Peristyle. Different stylistic periods can be seen in the decorative elements on this façade: two large rectangular windows on the first floor and the monumental portal in the ground floor belong to the Re-

naissance period; the balcony on the second floor of the palace shows the characteristics of the Baroque.

When it was being put in place, some parts of the capitals of the pilasters and the first column were hammered off so it could be fitted in. At first, access onto the balcony was through openings below the arches of the colonnade; and then, in the 19th century, the arches were cut, and a door was built into them. Such an understanding is invaluable because it tells us vividly about the attitude of the Palace’s denizens in the past to the Palace. In the 19th century, the third floor of the palace, which rises above the cornice of the colonnade, was remodelled in the Classicist manner. It is possible that the plaster on the façade derives in fact from this period. In the ground floor, right next to the Protyron, a new front door was incorporated.

After the making of an architectural drawing of the façade, the documentation of the as-found condition of the building as a whole and in detail was addressed, with written reports, photographs and graphic depictions. The actual works were started on the third floor of the palace with the removal of the organic and inorganic soiling and the cement mortar bonds between the stone blocks. The iron grilles were removed, and the corroded exterior mountings of the shutters were taken out. The broken parts of the stone frames were cemented on, and the damage was stopped up with stone patches. The application of cement on the upper side of protuberant mouldings above the windows was removed and replaced with a layer of artificial stone. Jointing was done with acrylic-lime mortar. The old shutter mountings were taken out and new chrome steel mounting elements were put in instead, and then sealed with molten lead.

Photograph: Preparation work for the assembly of the balusters

The supports for electricity cables were removed from the upper surface of the cornice, as was the thick application of cement. In order to ensure an appropriate fall for the drainage of water, the upper surface of the cornice was plastered with artificial stone. In the final phase of the work, it was capped with lead flashing.

All the stone surfaces were treated with biocide preparation and cleaned with water steam under pressure so as to remove the organic soiling. The dark sediments and black crust were removed with a sophisticated laser-cleaning method, so that the details of the masonry work could once again be seen, and the fine architectural decoration read

once more. At the same time as the cleaning operations, the cement was removed from the joints and replaced with acrylic-lime mortar. Cement and other patches on the building were removed, the iron items anchored in the stone were taken out and the unstable parts of the stone structure were consolidated. The salts were removed with poultices and chemical treatment.

One of the most demanding operations was the disassembly and reassembly of the railing of the balcony on the second floor. The missing pillar of the railing was carved in new stone. Structural damage was repaired with artificial stone. Worth mentioning are the reconstruction operations on the Renaissance

Photograph: Assembly of the stone balustrade of the balcony



windows of the first floor, on the stone areas around the openings in the arches on the second floor, on the bases of the columns and the upper part of the pilaster and the left capital of the portal on the ground floor.

The upper surfaces of protuberant parts of the façade were plastered, and all the stone areas were at the end treated with a surface protection preparation.

In parallel with the conservation-restoration operations on the stone areas, an extensive conservation-restoration operation was carried out on the plastered parts of the façade. For this reason, this part of the project brought in the wall painting and mosaic section of the Croatian Conservation Instituted

headed by Tonči Borovac MSc. Several different kinds of plaster were found on the façade, and it was decided that only lime and lime-cement plaster would be presented. The cement patches were stripped off and parts where the plaster threatened to come off were consolidated. After removal of the inorganic dirt and more recent coats, desalination was carried out on problem areas. The last step was reconstruction of the missing parts of the stucco. In the case of reconstruction operations to the plaster on the ground floor, particular attention was paid to presentation of the remains of a stone railing of 1860 found that had been placed there in 1860 on the place of a predecessor.

Photograph: Presentation of remains of stone rail found in the ground floor of the palace





Top photograph: Detail of the façade after the conservation-restoration operation

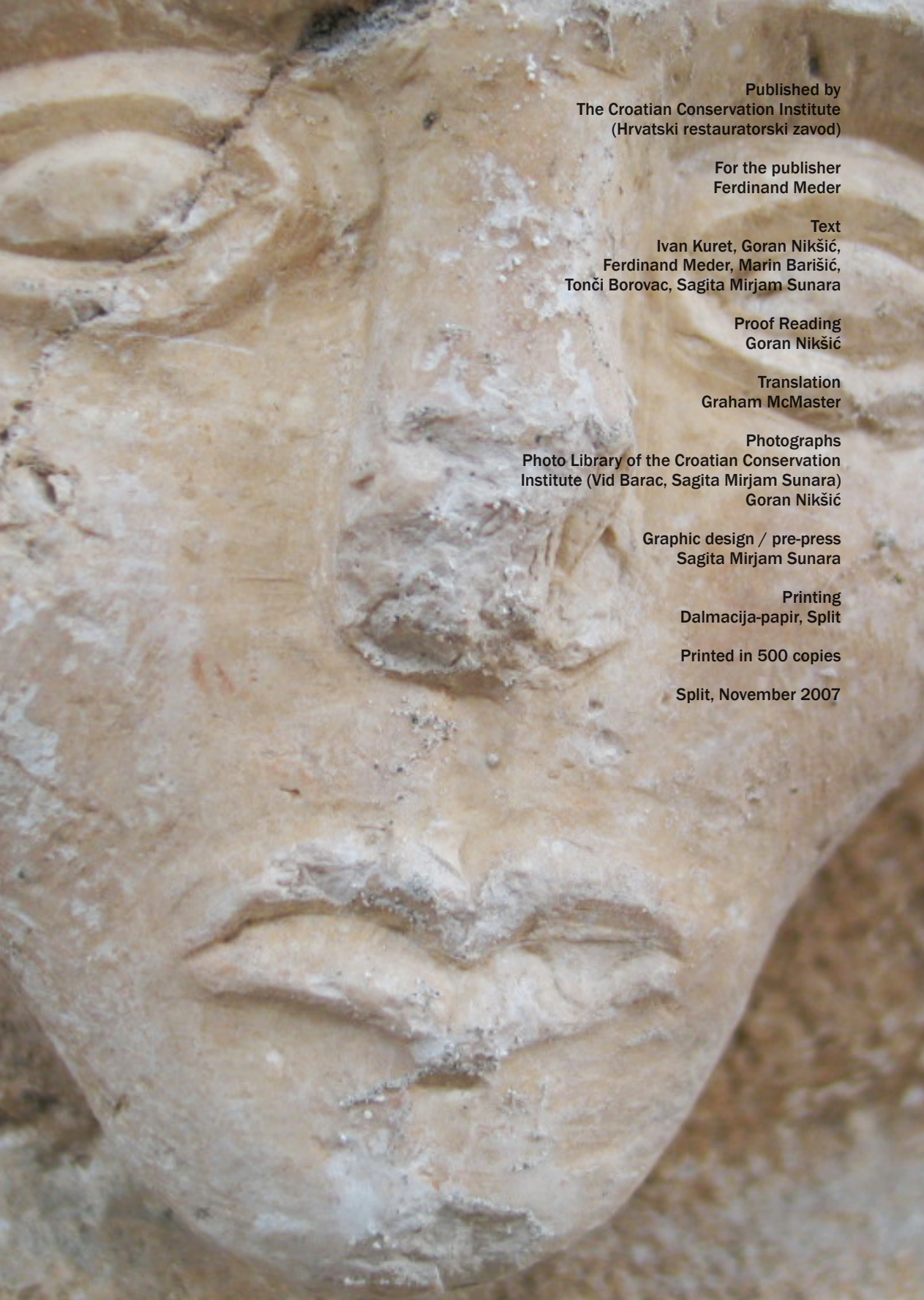
Facing page photograph: Façade of the palace after the conservation-restoration operation

The assembly of the shutters and the taking down of the scaffolding marked the end of the conservation-restoration operations on the southern part of the western colonnade of the Peristyle. With the dedicated work of the team from the Croatian Conservation Institute's stone moulding section, works on the façade of the Skočibučić-Lukaris Palace were completed in mid-June 2007, a full six months ahead of schedule. The expert team centred around the head of the stone moulding section manager and the leader of the project of conservation-restoration works on the Peristyle Marin Barišić consisted of:

Siniša Bizjak, Mate Pavin, Tihana Pleština, Ivan Sikavica, Maja Kiršič, Nenad Lešina, Mladen Matijaca, Marina Škarić and Sagita Mirjam Sunara, documentalist.

The conservation-restoration operation on the plastered parts of the façade of the Skočibučić-Lukaris Palace carried out under the leaderships of Tonči Borovac, MSc, leader of the Wall Painting Department and Dr Branko Matulić, associate of the section. The expert team consisted of Antonija Gluhan, Ivana Muratti, Josipa Milišić, Vinka Marinković, Ivana Hodak, Pinija Bulić and Srđan Ivanković.





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