

Natural Environment Protection and Restoration of Historic Landscaping Works For Preserving The Ancient City of Gyeongju

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ABSTRACT

This paper looks into how to preserve Gyeongju's natural environment and to restore its historic landscaping works, one of the great factors that compose ancient city as a way of wisely preserving Gyeongju, one of the oldest cities of Korea. Gyeongju, a city based in its natural environment, is formed inside of a basin of mountains and streams. Mountains and streams are the major two factors when one thinks of preserving the ancient city of Gyeongju. Four mountains surrounding the city play a direct role in marking coordinates of major city landmarks, while streams influence the structure and formation of the city in a great deal. More precisely, mountains should be able to be seen from the center of the city and streams should be restored in a way that they can serve as scenic identities of their time. Efforts should also be put into restoring such elements as ancient gardens, royal forests and water ways. The research team believes that such efforts themselves will be a great method in reclaiming historic values and significance of places of Gyeongju.

Restoring an ancient city is not limited merely restoring a city in an artificial concept, it reaches to preserving natural environment as a backdrop of the city and traces of landscaping works. When it comes to restoring an ancient city, one must understand that preserving natural environment and historic landscaping works are as valuable as restoring city structure or constructional elements. We believe that defining subjects of ancient city restoration must be more precise, clear and detail down the road.

Key Words: Restoring Ancient Cities, Old Gardens, Royal Forests, Old Passages, Water Ways

1. Introduction

A dictionary dictates that an ancient city refers to 'old capital.' The terminology can be used only when the city was a capital of a country. The term 'Historic City,' which has a similar meaning with ancient city, has much larger meaning to mean a city that poses historical value (Hwang, 2008: 13). Gyeongju, the capital of Silla, the capital of Buyeo and Gongju, Jeonju, the capital of the latter part of Baekje Dynasty, Iksan, where numbers of historical legacies of Mahan and Baekje are found and Seoul, the capital of the Joseon Dynasty

fall into the category of Historic City. Unfortunately, however, Seoul has lost too much to stay in the category and historical background is rather insufficient compared to other listed cities. The Act of Preserving Ancient City, therefore, seems to limit the use of the term, ancient city, to Gyeongju, Gongju, Buyeo and Iksan. Unlike other cities, an ancient city has specific characteristics that can only be found in a royal city such as palace, fortress, temple, royal tombs and historical facts related to governing the country. If one take a look at enlisted cultural assets of cities that currently designated as ancient city: Gyeongju has 297, Buyeo has 187, Gongju has

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185 and Iksan has 86 items (Park and Jeong, 2008: 454). The number of cultural assets itself proves the value of these cities as ancient cities.

Foreign countries, as well, are focusing protecting their cultural assets and historic environments by legislating such legal apparatus as Urban and Suburban Landscaping Law, the United Kingdom, The Law on Facilitating Building Structure Restoration and Supplementing the Law on Historic and Artistic Legacy, France, Law on Protecting Monuments, Bayern, Germany and Law on Earth Face and Historic Districts, the U.S.A. and etc (Namkung, 2000: 37~38). Japan, especially, enacted the Law on Ancient City Protection in 1966 and Law on Cultural Asset Protection in 1975 to preserve ancient cities posing historical value and historic landscaping works. The Law on Ancient City Protection focuses on preserving natural environments to protect historic and natural characteristics. Other countries as well are looking into various ways to preserve natural environments and historic landscaping works as a way of protecting historic environments. This tells us that preserving natural environment and restoring historic landscaping works play very important roles in ancient city preservation and they must be considered thoroughly.

Until now, ancient city preservation was limited to city framework and preserving certain buildings and policies and budgets were also focused on these. There should be, however, a shift in paradigm to focus more on restoring historic landscaping works and to consider more on natural environments as a way of to protect the ancient city of Gyeongju. It is quite attractive that restoration costs for historic landscaping works are relatively low and the effect of this is immediate.

The aim of this paper is to shed light on the current status of natural environment, find out ways to preserve it, select subjects for restoration and how to restore them.

II. Preservation of Natural Environment

1. Natural Environment of Gyeongju, the Ancient City

1) Mountains

Silla formed the city by taking the advantage of Gyeongju basin which is surrounded by mountains and streams. There are Sogeumgang mountain (178m) to north, Nam mountain

(466m) to south, Myoungwhal mountain to east and Seondo Mountain (380m) to south of Wallsung, the main palace. Moreover, Nang mountain, one of five holy mountains of Silla, is positioned closed to Wallsung. These mountains surrounding Gyeongju basin must have been considered as holy mountains to rituals and people always considered them close to themselves.

It seems that mountains of Gyeongju played significant roles in forming historic environments. The fact that Hwangnyongsa, one of the representative temples of Silla, is positioned in connection with those surrounding mountains proves this point. In other words, Hwangnyongsa, located in east side of Wallsung, the center of Silla, connects the summit of surrounding mountains posed a significant meaning in terms of place and scenery to Silla people. As one can see, mountains of Silla are an important subject that directly influenced the formation of the city (Refer to Figure 1). The mountains still exist as they have been for thousands of years being landmarks and icons of Gyeongju.

2) Streams

Gyeongju basin houses Namcheon to south, Bukcheon to north and Seocheon, part of Hyungsan River system to west. These three rivers provided Gyeongju with basic conditions to be the capital of Silla for more than a thousand years and influenced Silla people's way of life in a great deal. At the

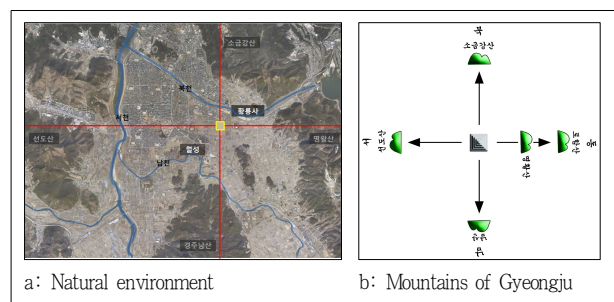


Figure 1. Contextual linkage of Hwangnyongsa
Data: Hong, 2008: 145-418.



Figure 2. Rivers of Gyeongju, the Ancient City
Data: Photo by authors.

same time, more than one researches identify that these waters served a greater role in forming the range and structure of the capital of Silla.

Bukcheon, which across Gyeongju basin has been drawing interests with overflow in rainy seasons and was an obstacle in forming the city in many ways. Overflow in Bukcheon, also known as Dongcheon, was so significant a natural disaster that it was recorded in *Samguk Sagi*¹⁾. Various researches show that the water passage was probably different than what is today. Even if it were the same, it is generally understood that the shape of it was hardly seen as an obvious water way (Kim, 2006: 174). And the southern part of Bukcheon, which is now where Bunwhagsa and Hwangnyongsa are, the remains of overflow are easily spotted. Archaeologists and historians assume natural environments through what was discovered around Bukcheon and records of overflow in the Gyeongju area and most of them claim that Bukcheon was the source of overflow. Articles of Bukcheon²⁾ and excavation of Hwangnyongsa place back up the fact that Bukcheon often overflowed (Cultural Asset Management Department, 1984: 44: 48).

By studying various researches on Bukcheon, one can assume that there had been numerous occasions of overflow which led the Hwangnyongsa region unusable low and swampy place. And when a bank was built in the southern area of Bukcheon and forests were formed, overflow damages were finally contained. As one can see here, Bukcheon has been a major element in land usage and city formation of Gyeongju. If that is the case, Bukcheon is an icon of Gyeongju, the ancient city and the original shape of water passage should have been kept. However, the current city plan of Gyeongju is being pursued without considering such facts. The stream houses artificial grass, exercising installations and pavements that can be seen everywhere and failed preserving the scenic image of Gyeongju, the ancient city.

2. Measures of Preservation of Natural Environment

1) Preserving Mountains

(1) Preserving Scenic Characteristics of Mountains

Mountains surrounding Gyeongju are representative scenes of the city and its natural environment were considered holy. However, it is difficult to feel the due dignity and piety.

High-risen buildings block the view from the center of Gyeongju to the surrounding mountains. Mushroomed apartment buildings in the city is one of the reasons and the same problem is being occurred in Hwangnyongsa where there is almost no building in the vicinity.

However, Gyeongju citizens still continue to file complaints asking for relaxation of altitude restriction which is now regulated under city planning. Restoring the city in the face of this complaint is practically impossible and should not be done. Therefore, the authority ought to provide them with proper explanation related to developments in urban area and compensate for their loss. At the same time, the city should come up with a plan to purchase high-rise apartments to increase the visibility of the surrounding mountains in the future.

(2) Restoring the Original Shape of Mountains

Some of cultural legacies left in Gyeongju are designated as national assets and protected under laws while some are left unprotected. Stand alone legacy cultural assets tend to be well protected and controlled whereas natural environments containing cultural assets are relatively vulnerable. When natural environments are not protected, the pace of damage will accelerate with the time and they eventually will reach a point where their original shapes become unnoticeable and lose their historic values.

Among many in Gyeongju, Namsan has so many Buddhist legacy assets, cultural and religious elements (Hong, 1994: 8). However, many things that are far from environment protection are happening in this region. Circular roads were paved and too many numbers of hikers walked the passage damaging the overall environment of Namsan that holds significant values in terms of history and landscaping works. Four-lane pavement were laid between Dodang Mountain Earthen Ramparts and Namsan Earthen Ramparts separating Namsan. Forest fire killed life and scenery of the mountain. With various extent, the similar things are happening to Toham mountain, Sundo mountain, Sokeumgang mountain. It is time to have more interests on restoring damaged surface and preserving natural environments of the ancient city and put more efforts on protecting them. What is also required is to recognize that preserving such natural environment is directly related to preserving historic environment.

2) Preserving Rivers

Bukcheon, Seocheon and Namcheon run through urban

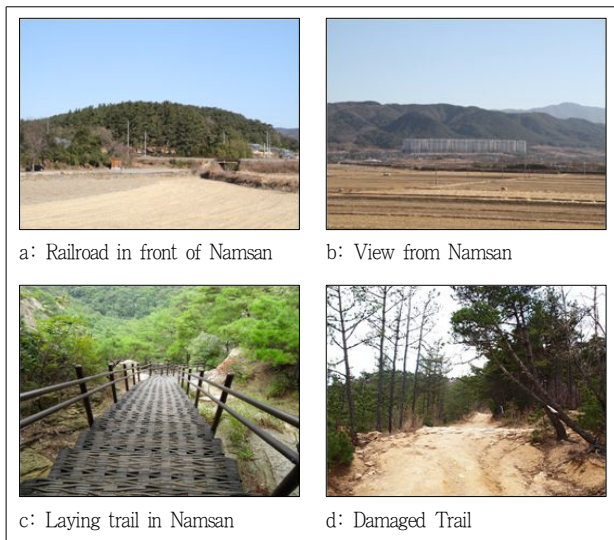


Figure 3. Damaged geographical features
Data: Photo by authors.



Figure 4. Damaged river scenery
Data: Photo by authors.

area of Gyeongju, Bukcheon separates the region into south and north while Seocheon and Namcheon surround the city from west and south. It is safe to say that rivers of Gyeongju influenced in forming the city and spatial structure in a great deal. In other words, forests were formed to control floods of rivers and such royal forests expanded usable lands of Gyeongju basin and it lead to the development of the royal capital.

The rivers today lost their original curves due to embankments. Parking lots, exercise facilities and walk and running trails were installed for the convenience of residents. Development of rivers of Gyeongju, which is known as a historic city,

in these ways is not in harmony with historic scenery and it is playing a major role in loss of the city's unique identity. Therefore, rivers in an ancient city should be developed and used in a different way and their original shape should be kept to the extent possible. It means that even if there is some amount of inconvenience in using the land, natural curvature of water, field of reeds, water plants must be protected and migratory birds should be able to fly when the time is right. This is supposed to be rivers of Gyeongju, the ancient city.

III. Restoration of Historic Landscaping Works

1. Restoration of Old Gardens

Old gardens are cultural traces that tells how was the culture and landscaping styles were like at that time. They are, without doubt, important elements that can be used in reviving values of history and place of the ancient city.

Although Gyeongju, the royal capital of Silla Dynasty, must have numerous gardens, only few are located and identified and they include Anapgi, Guwhangdongwongi, Yongangdongwongi and Gupumyeonggi in Bulkuksa. They represent gardens of Silla Dynasty and have unique value as Korea's traditional garden.

Samkuksagi dictates that Anaphi was constructed in the year 14 of King Moonmu (674). Anapgi is almost the only one that still maintaining its original shape among many old lakes. Anapgi is an artificial land formed with dirts that were gathered after creating a water passage and it harmoniously uses straight line and curves. Guwhangdongwongi and Yongangdongwongi have curved shore like Anapgi does and they both have islands within land. Although Gupumyeonggi of Bulkuksa is not yet excavated, research confirms that it has oval shape. If these gardens are restored, it is believed that they will certainly play a pivotal role in reclaiming the identity of Gyeongju. Historical and Cultural City Plan that is being pursued in Gyeongju should also focus restoring these old gardens and put more priority in this to make sure the image of the ancient city is regained at the earliest possible time. Unlike building structure, researches on these gardens were finalized and if there is little more of supplementation, the restoration can be done momentarily.

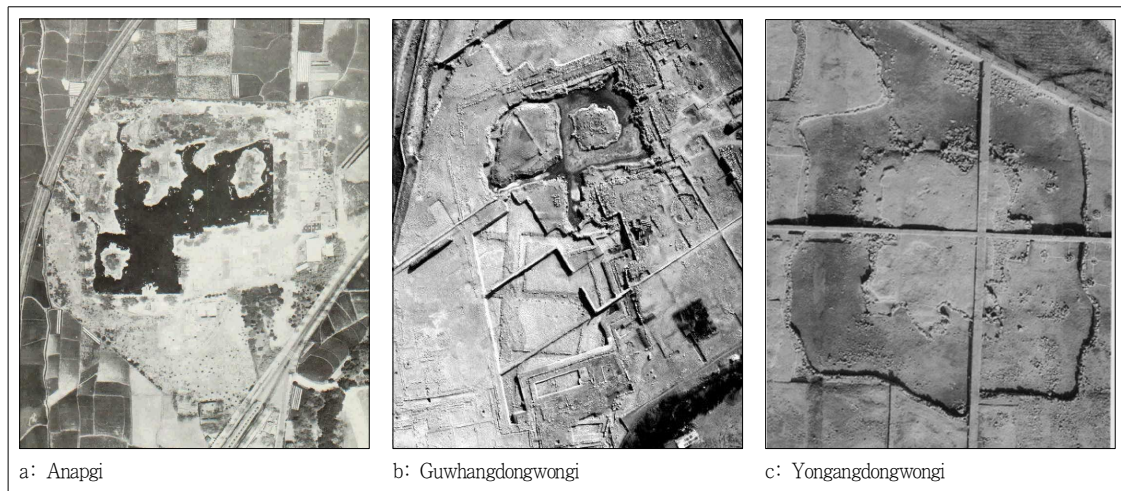


Figure 5. Garden legacy of Silla Dynasty

Data: a: Cultural Assets and Public Affairs Department, 1978.

b: National Gyeongju Cultural Assets Research Institute, 2008: 66.

c: Yeongnam Cultural Assets Research Institute, 2001: 198.

2. Restoration of Royal Forests

Numbers of historical records, including *Samkuk Sagi*, *Samkuk Yusa* and *Forests, Waters of Joseon Dynasty*, indicate that there were many forests in Gyeongju. And most of them are likely artificially formed royal forests rather than natural. When on consider the locations of these forests along with flows of rivers in Gyeongju basin, it is safe to say that forests in Gyeongju basin contains fen shui concept like artificial forests and lands obstructing the view of the mouth of rivers that were formed by Silla people do.

Among many royal forests in Silla Dynasty, Mooningrim, Nonhorim and Cheonrim are related to Bukcheon. Mooningrim is assumed that it is where Hwangnyongsa was which housed Jangyukjonsang with gold and iron sent from King Asoka of India (Lee, 2006: 196). Nonhorim was once recorded as Sungbookromjoong (城北林中) and it indicates Goyangsoo (高陽藪), which is now called Whangsung forest in *Dongkyoung-japgi*. Therefore, it is assumed that the forest may have been located a side of Bukcheon that runs south of Whangsungdong and north of Bukcheon (Lee, 2006: 197). Meanwhile, Chunrim is formed in the south of Hyunduk Royal Tomb, Dongchun-dong and it controlled the flood of Bukcheon (Lee, 2006: 197).

As one can see from the above, forests around Bukcheon were important landscaping solution functioning as a floor controller and protected Hwangnyongsa region. Finding out the fact that these forests helped Hwangnyongsa region be-

come usable lands is a significant result from the research on royal garden of Silla Dynasty. Such that, it is absolutely necessary to restore these forests along with Hwangnyongsa to revive the original scenery when Hwangnyongsa was first built.

3. Restoration of Water Ways

Among many rivers that run though center of Gyeongju, Bukcheon was an obstacle in land usage in many ways due to its overflow. Due to its geographical characteristics, Bukcheon is know to often overflow even in the old times. A land registration map indicates that unlike today where a modern embankment was built to secure certain distance between Bunwhangsa and Bukcheon, Bunwhangsa and southern part of Hwangnyongsa were in the range of effect of Bukcheon overflow before then embankment. This tells us that the water of Bukcheon ran through Hwangnyongsa area is not an unreliable claim.

Preceding research on Bukcheon indicate that Bukcheon ran in small water branches. Due it the geographical characteristics of Bukcheon water passage, there had been many floods and new and small water branches were generated from these floods. One of them was generated towards Bunwhangsa and Hwangnyongsa area. This water branch is expected to ran through northern area of Anapgi, between Cheomseongdae and Banwallsung and ran towards Namcheon. These water flows seem originated from before Silla



Figure 6. Rivers and forests of Silla Dynasty
Data: Lee, 2006: 196.



Figure 7. Where command forest was yoorim
Data: Photo by authors.



Figure 8. Gyerim
Data: Photo by authors.

Dynasty and part of Bukcheon water, in time of floods, drained through this passage towards Namcheon (Lee, 2002: 48~52).

Such that, restoring the flow of Bukcheon would have lots of meanings for Gyeongju, the royal capital of Silla Dynasty. While restoring the original flow of Bukcheon may be practically difficult, restoring water branches of it is possible. That is because the area where water branches may have ran, is now cleared for excavation of Hwangnyongsa. Moreover, excavation researches are being carried away in this area which means identifying the passage of water branches are not that difficult.

4. Restoration of Old Trails

Restoration of old trails is a basic framework in restoring an ancient city and it is to revive the city's historic structure and spatial authenticity.

They may have been many roads connecting the royal capital and its satellite cities in Silla Dynasty. Among them, there were three roads that reached from Silla to East Sea: Ulsan to south, Pohang to north and Gampo to east. Roads to Ulsan and Pohang are flatland, while the road to Gampo goes over rugged Hanwall and Toham mountain. *Samkuk Yusa* records that "King Sinmoon, the 31st King of Silla, acquired Manpasikjeok, a pipe, from King Moonmoo that changed into a dragon and rested for a moment at a stream-side of Kirimsa on his way back to his palace." This tells us that the way from Gyeongju to Kirimsa was, in fact, a connection between Seorabeol and the sea. This ancient road had been used as an important traffic route until the Churyoung Tunnel is open. Therefore, the road needs to be restored, for pedestrians at least, and help them feel the ancient footsteps of Silla.

The Silla royal capital had a road building system called Banglije which stipulated to build roads with certain clearance between them (Hwang, 2004: 39). In order to understand the structure of the city, it is the most important job to restore Banglije system. One of the place where the trace of Banglije system still remains is Hwangnyongsa area and number of royal capital related legacies, including SIEI - a complete Banglije system, were identified. Given the historical fact that the capital city of Silla Dynasty employed such system, the identified Bangli area helps us grasp the big picture of how the Banglije system were formed. When other parts of Gyeongju have lost its ancient Bangli system due to city developments, at least the Bangli system of Hwangnyongsa area should be restored. When it is done, it will help us to understand how the city were planned in the old time and will hold a great meaning as a historical place.

After the demise of Silla Dynasty, Gyeongju, once the royal capital, took a shame of degrading to a small city in rural area. The scenic characteristics of the city, as well, were lost. Especially, the building of Gyeongjueup Fortress was a turning point that changed the center of scenery of the city. Restoring the ancient city of Gyeongju is to be works of restoring the time that compressed over time, restoring reviving the historic city of Gyeongju comes to life with every piece of its bricks of more than a thousands years of history. Gyeongjueup Fortress is inevitable. It should not be just rebuilding a wall of the fortress, it must have the meaning of Relation between the royal capital which centered around

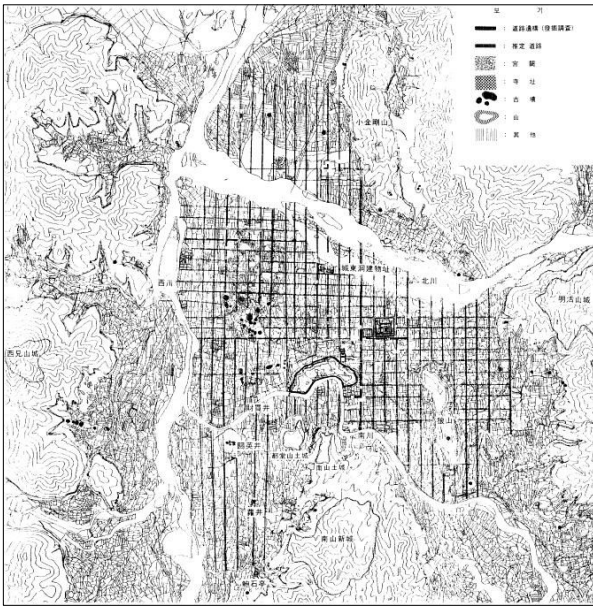


Figure 9. Restoration map of Silla Royal Capital
Data: Park, 1998: 232.



Figure 10. Excavated roads around Hwangnyongsa
Legend: — Current Road, - - - Road Excavation
Data: National Gyeongju Cultural Asset Institute, Temple,
2010: 500.

Wallsung and Gyeongjueup Fortress can be found not only in their geographical location but also their concept of city planning, Bangli system.

Although the historic sceneries are being improved as a result of Historical and Cultural City Plan, street restorations are just superficial and there is no plan for preserving city characteristics of the ancient royal capital. Restoration of old roads and preservation of cultural assets of Gyeongju is the

first step for re-establishing the identity of Gyeongju.

IV. Conclusions

An ancient city is the result of countless years of harmony of physical and human circumstances based on natural environment. And the city grows from organic relation of lives of the people lived in it. Moreover, the environment of ancient city that we see today is a living organism that filled with traces of people lived in the city for generations.

The ancient city of Gyeongju is a city formed based on its natural environment. Mountains and rivers surrounding the city heavily influenced in the formation of it. Such natural environment should be at the top of the list when it comes to restoration of the ancient city. However, Gyeongju's mountains and rivers have been seriously damaged from modern development. Roads are laid in mountains and lands were used without proper plan. Rivers have lost their original shapes to accommodate citizens' conveniences and now they have lost much of identity in terms of scenery and historic values. Therefore, restoration of Gyeongju should start from mountains and river in the city and they should be restored in a way to revive the city's scenic identity.

Another landscaping challenge is to restore elements consisting the city. Against this backdrop, it is very important to restore old gardens. Among many legacy sites and items that show what the ancient city of Gyeongju was like, there is only one old garden: Anapgi. It is sure, however, that if such garden legacies as Yonggangdongwongi or Guwhangdongwongi are restored, Gyeongju will have more complete image as an ancient city. At the same time, other elements that consist an ancient city, including royal forests, are worth to restore. There were no city like Gyeongju in Korea that had so flourishes forests. Today, unfortunately however, there is only one left: Whangsung forests where were known as Koyangsoo. Now that the city is being developed, restoring such forests will not be an easy task. But if we managed to restore at least part of it, it will help us understand and appreciate how royal city were like at its time. Especially, royal forests around Whangyoungsa should be restored along with the temple. At the same time, it is important to restore old water ways and trails.

In restoring an ancient city, which is preserving a city with an artificial concept, it is important to preserve the structure

or buildings that it has. But what is equally important is to restore traces of landscaping works and natural environment as they are significant elements that consist the city. Comparing to buildings or structure that a city might have, the city's natural environment or traces of landscaping works are relatively easy to restore and they often be inside of restoration budgets. It is the research team's belief that when it comes to restoring an ancient city, one must focus more on defining what to restore and pay attention to little details, as well.

Notes 1. 七年 夏四月 暴雨 關川水溢 漂流人家 金城北門自毀(Kang, 1979: Sillabongi Adalanisakeumjo Year 7).

Notes 2. 七年夏四月暴雨關川水溢漂流人家金城北門自毀 夏五月大雨關川水漲漂沒二百餘家 (Kang, 1979: Sillabongi Sojimaripganjo Year 18).

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Received : 24 November, 2010

Received in Revised : 14 December, 2010 (1st)
23 December, 2010 (2nd)

Accepted : 24 December, 2010

Three Anonymous Proof-readers