Decorative Elements of Traditional Malay House: Comparative Study of Rumah Limas Bumbung Perak (RLBP) and Rumah Limas Johor (RLJ)

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Abstract. In traditional Malay architecture, decorative elements are defined as non-structural elements and as “additional member” of the building that contributes to aesthetic and functional aspects of the architecture. Its ornamentation, form and pattern particularly in woodcarving and bamboo weaving reflect the uniqueness of local craftsmanship and the master carvers. There are at least 16 (sixteen) decorative elements of the traditional Malay house that have been identified by previous researcher. Architecturally in Malaysia traditional houses were categorised based on roof design, spatial organization and geographical setting which finally this categorization was named after the states. Each traditional house is in the state of Malaysia signifying particular style and architectural characteristics of that particular state. This article discusses the study of those decorative elements on the traditional Malay houses in the state of Perak known as Rumah Limas Bumbung Perak (RLBP) and traditional house from the state of Johor known as Rumah Limas Johor (RLJ). With the objective is to investigate the type, terms and characteristics of decorative elements site observations were done on selected twenty-five (25) of RLBP houses and another twenty-five (25) of RLJ houses. The analysis on visual data and verbal data were carried out to established architectural terminology and typology based on form and style of every decorative element. The study found that nine (9) decorative elements come to be the major characteristics of RLBP whilst seven (7) for RLJ; some with different name, form and style from other states. These similarity and dissimilarity contribute to the extension of the aesthetical theory and philosophy of the Malay traditional house in Malaysia.

1. Introduction
Decorative elements in Malay traditional architecture are a manifestation of the understanding of integration between functionalism and aesthetics. It represents the uniqueness and beauty of Malay symbols, arts, philosophy as well as great design work by local craftsmanship or carpenter. In fact, according to Ezrin [1], despite of traditional architecture being treated as primitive or outdated, it has always been the main source of references in the social and cultural studies by architects, historian and anthropologists. Thus, the term of ‘architecture is the manifestations of the society and their cultural practise’ will reflects the society’s way of life, their belief and philosophy; ‘all encompassing; forms important components in the uniqueness of a culture’. The existence of decorative elements in traditional Malay houses represents the integration between functionalism and aesthetics of architecture. Its ornamentation, form and pattern particularly in woodcarving and bamboo weaving
reflect the uniqueness of local craftsmanship and the master carvers. According to Nursuriani and Ismail [2], a decorative elements or architectural elements in Malay Traditional House were designed intentionally to facilitate and express the respect for Malay culture through the design structure of ornamentation.

An Overview of Traditional Malay House (Rumah Limas Bumbung Perak)

The development and expansion of the traditional Malay villages and towns at Perak during the colonial era outlined an interesting collection of architectural study. Architectural study along Sungai Perak established two types of architecture which are:

a) Traditional Malay architecture
The traditional Malay architecture found along the riverbank of Sungai Perak is mostly in the form of old Malay palaces, traditional houses including Rumah Limas Bumbung Perak (RLBP) and Rumah Kutai (RK) or Rumah Bumbung Melayu and mosques. Based on study by Anuar [3], Norhasandi [4] and Mohd Sabrizaa [5] found that RK were the earlier architectural style of the Perak Malay houses in comparison to RLBP. Apart from the timeline, the roof design and construction detail also mark the different between the two houses. The earliest house of RLBP found was built circa 1900s and continue until 1970s with certain architectural design development.

b) Colonial architecture
Colonial architecture are mostly located in several towns along the river such as Kuala Kangsar, Parit, Bota, Pasir Salak, Kampung Gajah and Teluk Intan where many houses, schools, offices, rest houses, mosques and hospital still stands and in use to this day.

An Overview of Traditional Malay House (Rumah Limas Johor)

Majority of ‘Rumah Limas Johor’ were architecturally influence from the Riau-Lingga in Indonesia, Dutch and English style Mastor Surat et-al [6]. The people of Bugis were migrated after the arrival of the Dutch East India Company in 1669 with the goal of monopolising the spice trade. Apart from that, more Bugis migrated to the other parts of Indonesia and other countries including Malaysia. Hence, most of the architectural styles in Johor were affected based on their history.

Several of traditional and hybrid Malays house can be classified mainly by their basic roof shapes Mastor Surat et-al [6]. They further explain that there are two (2) categories of Malays Traditional House which are:

a) Rumah Bumbung Panjang
The most common houseform is the bumbung panjang, characterised by a long gable roof. The bumbung panjang houses are the oldest identified in Peninsular Malaysia, many of them being over a hundred years old and still in good condition. It has a simple gable roof, supported by kingposts. The most common roofing material used for the bumbung panjang is the attap (a thatch made from nipah and other palm trees found in the local natural vegetation) Mastor Surat et-al [6].

b) Rumah Bumbung Lima and Limas
It was transformed from Rumah Bumbung Panjang over the years. The roof shapes of Rumah Berbumbung Limas was architecturally derived from pyramidal concept and fitted with ‘V’ shape ‘tebar layar’ at the top of the roof as to allow natural ventilation to coolest the house.
2. Literature Review

A few studies have been done on decorative elements of traditional Malay houses. With reference to Diagram 1, they were listed sixteen (16) decorative elements and further explain in detail in Diagram 2 within a particular traditional Malay house which is:

![Diagram 1. Decorative Elements of Traditional Malay House](source)

Source: Mohd Sabrizaa and Sufian [7]

Decorative Elements at Malay Traditional House

a) *Tunjuk Langit (literally means pointed to the sky)*

It is a piece of decorative element in an upright position at the tip of the gable end; commonly used in houses and palaces in Peninsula Malaysia. In general, this type can be further categorised into few basic types; i. batang (rod), ii. bulat (rounded) iii. silang (cross) and iv. bunga (floral). The batang type is a piece of decorative timber or rod and is commonly used for Bumbung Limas roof. It has been observed that the rounded and floral is commonly used on bumbung perabung lima or pyramidal type of roofing and is positioned in the middle top of the roof. Most are made of carved timber solids but of late there has been practices found to have used the concrete mix similar to the one used for the Malay gravestones. Commonly called *buah buton* in Kelantan and *buah gutung* in Terengganu

b) *Sisik Naga (literally means dragon fin)*

Sisik naga refers to the decorative carvings along the ridge of a roof (*perabung and rabung atap*). Sisik naga are decorative architectural elements can be found in palace architecture, residential and religious buildings in Malaysia, Indonesia and Indochina. Other names are *kemuncak, naganaga, puncak rabung.*
c) **Sulur Bayung**

Sulur bayung refer to a decoration on the corner of a roof edge. Other names are *sulo bayung, sayap layang-layang, sayap layangan, ekor itik, anjong balla*, som. In the traditional architecture of Bugis Makassar it is also called *anjung balla*, representing the creeping plants, Mohd Sabrizaa and Sufian [7].

![Diagram of Sulur Bayung](image)

**Figure 2. Decorative Elements of Traditional Malay House**

d) **Ande-Ande**

Ande-ande is the term used in Kelantan and Terengganu for fascia board also known as *papan manis* is the horizontal decorative timber roof eaves covering the timber rafters (kayu kasau). Other names ande-ande are *papan meleh, papan pator, papan cucuran atap, papan kaki atap, kening, papan tumpu kasau, papan cantik*. There are at least two types of ande-ande which are the single piece type with carvings on a single long timber piece and multiple pieces) with carvings on multiple timber pieces arranged side by side, Mohd Sabrizaa and Sufian [7].

e) **Pemeleh**

Other names for *kayu pemeleh* are *peles, pemeles, papan layan*. Kayu pemeleh is actually a pair of timber pieces located on two fascia ends of a gable roof (tebar layar). The ones covering kasau lintang or kasau jantan is called peles or pemeleh in Kelantan and Terengganu but called papan layang elsewhere. Kayu pemeleh or peles is shaped slightly curving and sharpens towards the top as a sign of strength in the design language of houses in Kelantan, Terengganu on the East coast and also in Cambodia and Pattani in Thailand, Yusoff and Rashid [8].
f) Kepala Cicak (literally means lizard head)
Hanafi [9] identified kepala cicak as a type of end decoration to tumpu kasau or papan meleh. There are two types of kepala cicak which are the “L” type with the end timber pieces positioned abutting to one another at corners of the roof eaves (bucu atap) and the “I” type with a single end timber piece positioned on chamfered corners of roof eaves.

g) Tiang Gantung (literally means hanging column)
Other names for tiang gantung are saka bentung, tiang guntung, tiang sotoh. In traditional houses of Negeri Sembilan it looks like a small carved hanging column positioned at the tip of the alang that is supporting the main kasau jantan serambi and is called tiang guntung. Also called saka bentung in the traditional Javanese architecture and on the house of Negeri Sembilan it is known as tiang sutoh.

h) Lebah Bergantung (literally means hanging bees)
Halim [10], Norhasandi et. al [11] and Jahn et. al [12] uses lebah bergantung to describe it in his narration of Rumah Kutai (RK) houses in Perak; as a style of hanging column at the end of alang panjang, rumah ibu, that is constructed as a set (left and right) on the bottom of the gable end of the roof (tebar layar). It is round in shape the size of the local water vessel (labu air) looking very similar to the bees nest.

i) Kekisi (other names Kisi-kisi, kekipas, jeriji, jeruji, terali)
Decorative piece of timber or rod used at the opening of a window function as window grill.

j) Gerbang (Archway)
Decorative piece of timber as an arch at entrance of a house or used for dividing space usually between Anjung and Rumah Ibu of the main house.

k) Gerbang Pintu (Arch door)
Decorative piece of timber as an arch at entrance of a house or used for dividing space usually between Anjung and Rumah Ibu of the main house.

l) Sesiku Keluang
Decorative piece of timber normally in shape of triangle fix to the column and sometime function to support the beam. Otherwise it is for decorative purpose.

m) Pagar Musang
Balustrade In the form of timber rod or timber plank often beautifully carved and arranged to decorate the window opening. It is function as safety features apart from its aesthetical role. The other names also known as Jeriji, Jerejak, Pagar Tinggalung.

n) Kepala Pintu (literally means door head)
This is a decorative piece of timber on top of the door. Normally carved with floral pattern, Quranic verses calligraphy or simple motif of jejala (lattice work). Apart from aesthetical reason its function is to allow sufficient cross air ventilation to flow into the house.
o) **Kepala Tingkap (literally means Window head)**
A decorative piece of timber located on top of the window. Normally carved with floral pattern, Quranic verses calligraphy or simple motif of jejala (lattice).

p) **Lubang Angin (literally means air hole)**
A ventilation hole or panel located mostly at two locations such as wall and roof. Lubang Angin at roof area is actually located at gable’s end whilst Lubang Angin of the wall is commonly found at the upper level of wall in the form of carving or latticework known as jejala.

3. **Research Methodology**
This study aims to investigate the existence of decorative elements at RLBP and RLJ. As discussed, RLBP are located in the state of Perak whilst RLJ in the state of Johor at the southern of the Peninsula. The selection of RLBP and RLJ were done based from previous study by the author and the research team member. An exploratory research was carried out through site observation on traditional villages at both states during the previous study by Mohd Sabrizaa et al. [13] and current study. Thirty (30) RLBP and twenty seven (27) RLJ were observed and documented from that particular. For the purpose of this study twenty-five (25) houses were selected from each state for RLBP and RLJ. The selection was done based on their best level of authenticity, architectural type, current physical condition, accessibility and geographical factor. All the houses than were coded accordingly. Many houses were found have done major renovation by the owner and has lost its ingenuity in terms of traditional architectural style. Few houses also found to be abandoned and left over by the owner and make it difficult to access for the study. Many houses were found heavily damaged and ruined. These are some of the factors that contribute to the limitation of the scope of the study. Documentations of visual data were collected using EOS DSLR Canon 6D camera whilst semi-structured interview were done to collect verbal data from the owner of the house or the occupancies. Both data were used to investigate and identify the existence of the type of decorative elements at selected RLBP and RLJ. Results were discussed based on the visual tabulation and inventory analysis produced from the study.

4. **Discussion and Analysis**
This research is intended to execute a Comparative Study of Decorative Elements of Rumah Limas Bumbung Perak (RLBP) and Rumah Limas Johor (RLJ) as a main subject matter. Hence, before proceed to the analysis of the decorative elements; identifying a location of the houses is critical. According to Mohd Sabrizaa et al. [13], the best of twenty-five (25) of RLBP were selected for this study and were coded as (Table 1) while this study observation identify the best of twenty-five (25) of RLJ house and were coded as (Table 2).

| CODE  | House Address                                      | Area       | GPS                      |
|-------|----------------------------------------------------|------------|--------------------------|
| PLH1  | 195A, Jalan Besar Utara Selatan, Kampung Bendang Susur, 33000, Kuala Kangsar, Perak. | Kuala Kangsar | (4.797586, 100.947479)  |
| PLH2  | 5460, Jalan Besar Utara Selatan, Kampung Kuala Chempias, 33000, Kuala Kangsar, Perak. | Kuala Kangsar | (4.787324, 100.942841)  |
| PLH3  | 5460, Jalan Besar Utara Selatan, Kampung Kuala Chempias, 33000, Kuala Kangsar, Perak. | Kuala Kangsar | (4.791505, 100.944878)  |
| PLH4  | Jalan Besar Utara Selatan, Kampung Kuala Chempias, 33000, Kuala Kangsar, Perak. | Kuala Kangsar | (4.791723, 100.944916)  |
| PLH5  | Jalan Besar Utara Selatan, Kampung Kuala Chempias, 33000, Kuala Kangsar, Perak. | Kuala Kangsar | (4.792849, 100.944893)  |
| PLH6  | 17, Jalan Besar Kampung Bendang Kering, Kampung Kuala Sayong Hulu, 33000, K.K. | Kuala Kangsar | (4.79046, 100.964989)   |
| PLH7  | Jalan Besar Utara Selatan, Kampung Padang Ampang, 33000, Kuala Kangsar, Perak | Kuala Kangsar | (4.809263, 100.953140)  |
Table 2. RLJ location and GPS Positioning

| Code | Owner's of Traditional House | Location | GPS               |
|------|------------------------------|----------|-------------------|
| RLJ 1 | En Mohktar Masnot | Muar 1 | 1.9839762177636108,102.62135520001953 |
| RLJ 2 | Hj Hassan Bin Ali | Muar 2 | 1.989643161773682,102.617088317711 |
| RLJ 3 | Hj Adnan Hj Kasan | Muar 3 | 2.010014295578003,102.632809596094 |
| RLJ 4 | Hj Mastihajah Hj Hashim | Muar 4 | 2.069414387929453,102.57777740478516 |
| RLJ 5 | Rumah Perjumpaan Dato’ Onn | Muar 5 | 2.0673136711220605,102.5729522705781 |
| RLJ 6 | Hj Sirait Bin Wongso | Muar 6 | 2.07494640530418,102.56961822259766 |
| RLJ 7 | Mohd Noor Bin Mumba | Muar 7 | 2.047588,102.597622 |
| RLJ 8 | Tn Hj Ismail Bin Sharif | Muar 8 | 2.051632427459717,102.57333248595078 |
| RLJ 9 | Hjh | Tangkak 1 | 2.1494321823210177,102.5612564086914 |
| RLJ 10 | Hj Ali Haji Husin | Tangkak 2 | 2.1592586040496826,102.558738074961 |
| RLJ 11 | Hj Hamzah Hj Hassan | Tangkak 3 | 2.1592586040496826,102.558738074961 |
| RLJ 12 | En Johari Abdul Rahman (OKU) | Tangkak 4 | 2.164486408236426,102.55673217773438 |
| RLJ 13 | Hj Yusof Abdullah | Tangkak 5 | 2.0862557888031006,102.53794860839844 |
| RLJ 14 | Tn Hj Bakar Hj Harun | Tangkak 6 | 2.0826587677001953,102.54161233535156 |
| RLJ 15 | Kakak Jaafar Omm | Tangkak 7 | 2.07961273353938,102.5452651977539 |
| RLJ 16 | Hj Rostam Hj Abd Kadir | Benut 1 | 1.6430389881134033,103.29680633549222 |
| RLJ 17 | Hj Abd Rahman Kasan (Kini En Zaki Hj Yusof) | Benut 2 | 1.680694083581543,103.28093719482422 |
| RLJ 18 | Daeng Marpunah (Kini En Mohamad Noor Bin Daeng Marpunah) | Benut 3 | 1.6742196398823105,103.22491455078125 |
| RLJ 19 | Parit Karimun | Tangkak 2 | 1.679820991485596,103.2356338509766 |
| RLJ 20 | Parit Makueseng | Tangkak 3 | 1.62381935196289,103.2294692993164 |
| RLJ 21 | Hj Omar Abu Hasan (Kini Hj Md Noh Bin Hj Omar) | BatuPahat 1 | 1.8821034067628128,102.78423309261727 |
| RLJ 22 | Maan Bin Ahmad | BatuPahat 2 | 1.88373921747827,102.7817535400906 |
| RLJ 23 | Isnin Bin Ujan (Kini Khairul Rizal Bin Ibrahim) | BatuPahat 3 | 1.878940339032593,102.78873443603516 |
| RLJ 24 | En Rosli Bin Latif | BatuPahat 4 | 1.878459343734741,102.78955841064453 |
| RLJ 25 | Mat Som Hj Ahmad (Kini Fatimah Bt Mat Som, KL) – sebelah Z&D Homestay | BatuPahat 5 | 1.870325,102.801342 |
A Comparative Study of RLBP and RLJ

**Table 3. RLJ location and GPS Positioning**

| Nos | Decorative Elements / Coding Code | House Code Rumah Limas Bumbung Perak (RLBP) | House Code Rumah Limas Johor (RLJ) |
|-----|-----------------------------------|---------------------------------------------|-----------------------------------|
| A   | Tunjuk Langit (literally means pointed to the sky) / TL | 1 2 3 4 5 6 7 8 9 | 1 2 3 4 5 6 7 8 9 |
|     | Not Available                     | 10 11 12 13 14 15 16 17 18 | 10 11 12 13 14 15 16 17 18 |
|     | Not Available                     | 19 20 21 22 23 24 25 | 19 20 21 22 23 24 25 |
| B   | Sisik Naga (literally means dragon fin) / SN | Not Available | Not Available |
| C   | Sulur Bayung / SB                 | Not Available | Not Available |
| D   | Ande-Ande / AA                    | 1 2 3 4 5 6 7 8 9 | 1 2 3 4 5 6 7 8 9 |
|     | Not Available                     | 10 11 12 13 14 15 16 17 18 | 10 11 12 13 14 15 16 17 18 |
|     | Not Available                     | 19 20 21 22 23 24 25 | 19 20 21 22 23 24 25 |
| E   | Pemeleh / P                       | 1 2 3 4 5 6 7 8 9 | 1 2 3 4 5 6 7 8 9 |
|     | Not Available                     | 10 11 12 13 14 15 16 17 18 | 10 11 12 13 14 15 16 17 18 |
|     | Not Available                     | 19 20 21 22 23 24 25 | 19 20 21 22 23 24 25 |
| F   | Kepala Cicak (literally means lizard head) / KC | Not Available | Not Available |
| G   | Tiang Gantung (literally means hanging column) / TG | Not Available | Not Available |
| H   | Lebah Bergantung (literally means hanging bees) / LB | Not Available | Not Available |
| I   | Kekisi (other names Kisi-kisi, kekapis, jeri, jeri, terali) / K | Not Available | Not Available |
|     | Not Available                     | 10 11 12 13 14 15 16 17 18 | 10 11 12 13 14 15 16 17 18 |
|     | Not Available                     | 19 20 21 22 23 24 25 | 19 20 21 22 23 24 25 |
| J   | Gerbang (Archway) / G             | 1 2 3 4 5 6 7 8 9 | 1 2 3 4 5 6 7 8 9 |
|     | Not Available                     | 10 11 12 13 14 15 16 17 18 | 10 11 12 13 14 15 16 17 18 |
|     | Not Available                     | 19 20 21 22 23 24 25 | 19 20 21 22 23 24 25 |
| K   | Gerbang Pintu (Arch door) / GP    | Not Available | Not Available |
| L   | Sesiku Kehuang (other names Tupai-tupai) / SK | Not Available | Not Available |
| M   | Pagar Musang / PM                 | 1 2 3 4 5 6 7 8 9 | 1 2 3 4 5 6 7 8 9 |
|     | Not Available                     | 10 11 12 13 14 15 16 17 18 | 10 11 12 13 14 15 16 17 18 |
|     | Not Available                     | 19 20 21 22 23 24 25 | 19 20 21 22 23 24 25 |
| N   | Kepala Pintu (literally means door head) / KP | 1 2 3 4 5 6 7 8 9 | 1 2 3 4 5 6 7 8 9 |
|     | Not Available                     | 10 11 12 13 14 15 16 17 18 | 10 11 12 13 14 15 16 17 18 |
|     | Not Available                     | 19 20 21 22 23 24 25 | 19 20 21 22 23 24 25 |
| O   | Kepala Tingkap (literally means Window head) / KT | Not Available | Not Available |
5. Findings

This study established and highlighted the existence of decorative elements on both RLBP and RLJ. The aim of this study is to look into the architectural characteristics by investigating the similarity and differences of decorative elements of both types of houses (refer Table 3). Based on inventory analysis and comparative analysis done on both type of houses it can be concluded that:

A) Most of the decorative elements studied were found on both types of houses. There were 9 decorative elements that found on RLBP and 7 decorative elements on RLJ. 2 decorative elements which do not exist at RLJ are Kepala Cicak (KC) and Tunjuk Bumi (TB). This indicates that KC and TB are two major decorative elements that shape the characteristic of RLBP.

B) Kepala Tingkap (KT) was found at both RLBP and RLJ. As discussed earlier the existence of KT was not only for aesthetic reasons but also function for air flow. This indicates that both types of houses produce good cross ventilation by maximizing wall openings. This study found that the designs of KT at RLBP are slightly different from RLJ. Both have the semi-circular or fan like shape with different composition.

C) Both RLBP and RLJ were built on stilt which elevates the house from the ground. This is common for a vernacular house in the tropical climatic zone. This study found that most of RLBP are much higher from the ground (around 2 – 2.5m) compared to RLJ (around 1.5m). The lower part of the house at the ground is called Kolong. For RLBP this space is used as a place to relax during daytime. This study found that decorative fan was used to cover the bottom part of the house called Pagar Musang (PM) or Kekisi (KK) for RLJ. It is also known as Banji. This decorative element enhances the architectural characteristics of RLJ.

D) The window design for both RLBP and RLJ is called Tingkap Labuh (literally means long window) simply because it is a full height opening from floor level to the above. Both RLBP and RLJ used Pagar Musang (PM) as decorative elements and function as balustrade to protect people from falling down. This study found that 4 inches to 5 inches width of carved timber piece were used at RLJ compared to carving array used at RLBP.

E) Openable louvred timber window is popularly used as Daun Tingkap or the window piece used at RLJ. This compared to RLBP that used solid timber plank as their window piece. These elements contribute to the characteristics of RLJ.

F) The used of Gerbang only can be found at RLBP. This element become one of the major characteristics of RLBP.

As discussed earlier decorative elements were considered or defined as additional or extra elements of the more functional structure elements. As a traditional architecture decorative element play important role in shaping the characteristics and identity of a particular house. This study contributes to the development of the aesthetical theory and concept of the Malay architecture especially the RLBP and RLJ.

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