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## Architecture Ecologised: Nature's Patterns and Abstractions in Malay Built Traditions

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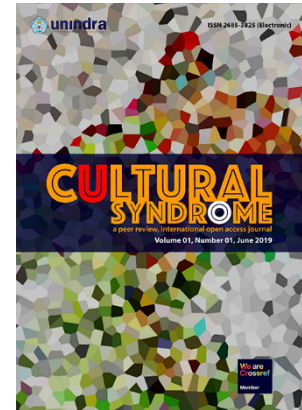
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## Architecture Ecologised: Nature's Patterns and Abstractions in Malay Built Traditions

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**Abstract.** The following paper discusses analysis and morphology of key motifs and patterns drawn from a range of cases in Malay architecture and built form, which arise of centuries of observation of nature and its eventual artistic expressions in building elements. They focus on patterns found in many traditional buildings repeatedly across the Nusantara. These patterns, taken from flora and fauna of the region, recall how woodcarvers, artisans and builders were inspired by the living beings which they found surrounding them. The paper highlights that these nature-related motifs represent a 'regionalising' aesthetic strategy, which vary in terms of location, and which builders and patrons of architecture used to regionalize and 'localise' their buildings and cases. The hand-drawn motifs in the study were then related to the symbolic and spiritual meaning of them, highlighting that these meaning could be again re-instated in modern architecture. The motifs could represent a spiritual and regional means of re-infusing the built environment with a 'soul' and meaning, in the midst of modernization and urbanization.

**Keywords:** Traditional motifs, symbolic meaning, ornamentation, vernacular architecture

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### Introduction

Ornamentation of the Malay world can be found in the details of Malay Nusantara built environment through decorative motifs inserted in measured tones into elements of interior and exterior of buildings and structures. Architecture in Malay traditions is

principally formed through a constructional system with structure-frame tectonic limitations and thus, ornamentation is a way of instilling a poetic soul and spirit into constructional forms of architecture. The transformation of nature's elements into the realm of art and architecture is however a traditional process that had span centuries. Over time, what were simple forms and patterns had evolved into complex and meaningful forms of Malay ornamentation arise from the inherent intimacy between craftsmen and the elements of nature's life in their natural surroundings. Through their craft and skills, they elevate merely architectonic to expressive form. Inherently, ornamentations are representative of, an essentially traditional preoccupation with nature's forms and the variations.

In the field of timber and woodcarving, [Tohid](#) for example, had described the process of woodcarving as a form of worship itself in Islam. To the craftsmen, working with elements of nature are as seen as signs of a creator and the, assembling and arranging into design motifs, and its eventual infusions into built forms. The Malay world sees 'Nature' as a slow growth, a steady movement that is beyond the apprehension of man. Elements of nature seem to originate from a mysterious 'Source'. The renowned master craftsman (Adiguru), Wan Mustafa Wan Su denoted that the "Source" is reflected in the dynamic and quietly vigorous elements are translated into ornamental motifs constrained by Malay nature and bounds of moderation ([Tohid](#)).

These are incorporated in the traditional architecture in forms of openings and decorative panels on windows and doors, roof ends and walls. Climate and culture are combined seamlessly in elements of decoration in the Nusantara house as each element proclaim both 'utility' and 'delight'. The traditional interiors in Malay traditional buildings have high ceilings and a roof that is enhanced with perforated panels which facilitates ventilation and daylighting into the interiors. The perforated panels or carvings are cut out (ukiran tebuk tembus) panels that are normally used on gables or tebar layar and partition panels (on top of windows, doors and walls or lubang angin). The carvings also afford an environmental purpose and function by allowing a control led admission of daylighting penetration and wind-induced ventilation.

This ornamentation including carving and making represents essentially a process of interpretation by the artisans as they observe and abstract from elements from the surrounding environment. This closeness and reverence of nature is reflected in the names given to the carving motifs; itik pulang petang, kepala cicak, tampok manggis, bunga tanjung (*Mimusops elengi*), bunga cempaka (*Michelia champaka*), bunga tikam seladang (*Vallis glabra*), ketumbit, bunga teratai (*Nelumbium nucifera*) and ketam guri and etc. The names of the listed motifs are associated to animals and flowers which suggest the inspirations source of the carvers. [Kamarudin and Said](#) have categorized the carving panels into twelve types. [Rashid et al.](#) propagated that the cut-out carvings or ukiran tebuk tembus that are normally used on gables or tebar layar, partition panels (on top of windows, doors and walls or lubang angin) environmentally functions to create a liveable and comfortable spaces within the traditional houses.

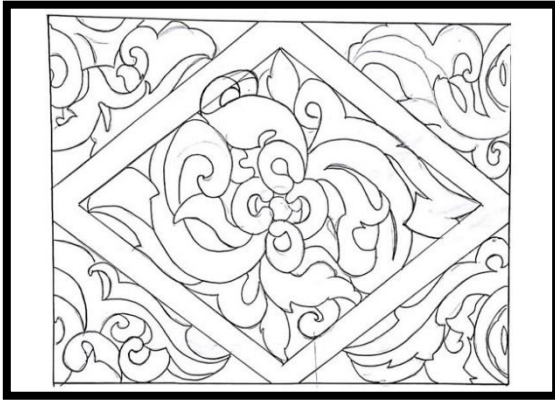
These components are categorized into three types according to structure, element and decoration. The ornamental elements can further be seen on the façade of the

buildings such as fascia boards, barge boards, door leaves, and not only ventilation panels over doors or windows, and perforated wall panels. The wall panels and openings have solid and void of a balanced ratio in order allow for breeze to circulate into and out from the ([Rashid](#)). Furthermore, they allow optimum sunlight to pass through its perforation and consequently lit the interior. Simultaneously, intricate shadows are casted on the house floor adding beauty to the interior. Thus, carved components of the timber buildings have both functional and aesthetic purposes.

The vegetative, floral motifs are symbolic of the nature of the deep ethic of environmental of the Malay Nusantara community. Calligraphic elements can be seen fused with the more organic motifs represent the context of the tropical lush vegetation and a rich profusion of flora life reflecting this region. Calligraphy, as described by [Safwat et al.](#) 'calligraphy was developed to capture in visual form the effects of the spoken word, and that the visual rhythms to be found in the shapes, and treatment of letters and words reflect those of the spoken word'. There is a constant engagement between the 'spoken' word or verse and the organic forms of nature derived from a large range of species. In the principles of 'awan larat', leaves, waves, fruits and parts of flora are expressed into the formations of the 'awan larat'. These are abstracted through a subtle approach and these form the solid part of a wood carving panel, interspersed with an almost equal balance with the void areas. Foliage forms integrated into the awan larat represent one of the noblest elements of architecture which are seldom placed lower than the head level and are integrated at elevated locations.

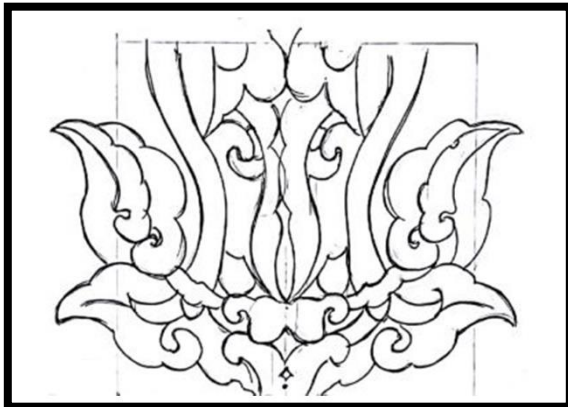
### **Examples of Key vegetals motifs in traditional architecture**

The following are the summary description of key motifs found in Malay architecture which exhibit different variations according to region. Depictions of flora elements such as the leaf, stalk, flower, fruit and tendrils are replete in these works but are reworked and varied according to site and place and cultural peculiarities. The variety of leaves range from from the two-part broken leaf to three-edged leaves. The three-part leaf may consist of petola leaf, a kind of climbing plant of edible gourds and the peria or the bitter gourd plant ([Shaffee and Said](#)). The stalk is typically the backbone of the carving structure and balanced by the organic forms of flowers, leaves and tendrils. Plants depicted in the recognisable curved silhouette of the stalk which are so linked to the Malay patterns.

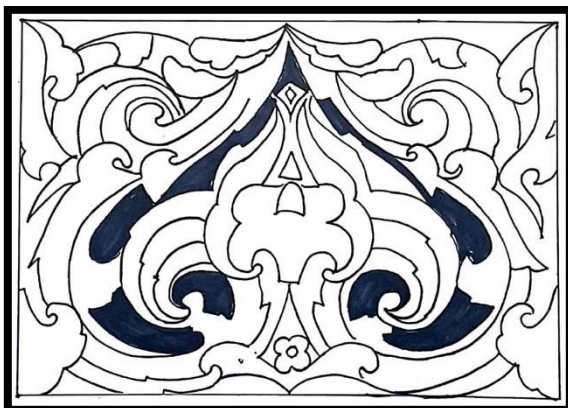


**Fig. 1** Bunga Langkasuka Motif–Pulpit Panel at Surau Langgar, Kelantan

This Langkasuka flower motif can be in various buildings and interiors such as mimbar (Pulpit) at Masjid Langgar, Kelantan, built in the early 19th century. This special wooden panel consist of motifs of the Daun Ketumbit on a central floral motif with the Daun Langkasuka surrounding it. Both are medicinal plants. The design evolves into a braided figure-of-eight pattern of Daun Dewa (Langkasuka) and Daun Ketumbit ([Othman](#)). Langkasuka was a kingdom founded early in the 2nd Century AD, and it was the first Malay Kingdom located in the neighborhood of modern Pattani ([Zamberi](#)). The Langkasuka motif was known as a spiral motif and this motif was inspired by the process of growth in nature. It was also related to the Ayuthaya Kingdom of Siam and the Majapahit kingdom. Basically, the motif depicts the intertwining of the Daun ketumbit (*Leucas Lavandulifolia*), - a flowering plant with white small flowers and which have nutritional and medicinal value; with the Daun Langkasuka (*Gynura divaricata*) which is a short plant that can reach up to 60 cm height that can be found vastly In East Asia especially China, India, Nepal, Bangladesh, Myanmar, Thailand, Malaysia, Indonesia to New Guinea. The renowned Malaysian carver, Norhaiza Nordin had stated that the Langkasuka motif can often be arranged in a variety of positions, which can also be taken to correspond to hand positions in the Malay martial arts. His earlier publications include *Ukiran Melayu Warisan Melayu* (published by Kraftangan Malaysia), *The Spirit of Wood, The Art of Malay Woodcarving*, Farish A. Noor. Eddie Khoo (2003), commemorating exhibitions at the Asian Civilisations Museum in Singapore, as well as at the Brunei Gallery in the University of London, in 2003 and 2004 respectively, and *Jejak Langkasuka* ([Noor and Khoo](#)).



**Fig. 2** Bunga Langkasuka Motif –Tomb Carving of Tok Ku Tuan Syed



**Fig. 3** Bunga Langkasuka Motif-Wooden Rehal Carving



**Fig. 4** Bunga Seri Pagi Motif-Awan Larat Wood Carving

The Bunga Seri Pagi (Morning Glory) is a motif typically used as art on wood that have been used to decorate palaces at Perak. Known as the Palace of Memories, the Istana Kenangan is an example of where this motif can be found and it is a structure made entirely of wood and woven bamboo, without the use of a single nail. Built in 1926, it served as temporary royal quarters until the nearby Istana Iskandariah, the current residence of the sultan of Perak, was completed. This design has been a decoration for

exterior at Istana Kenangan. Istana Kenangan is one of symbolizing of the traditional Malay architecture. This motif was used integrally with its Dinding Tepas or Wall Bamboo Wickerwork with Keralai or Diamond-shaped Pattern. The motif symbolize sunlight as a main source of our life that remember us to the Creator of the universe, Morning glory means the glory and the majesty of the royal king. The motif conveyed a certain aura of spiritual or at least other worldliness.

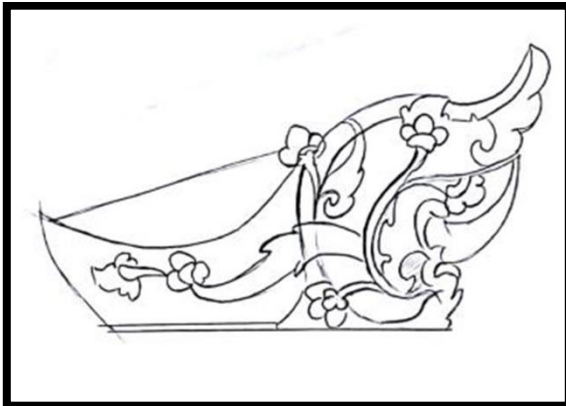


Fig. 5 Daun Bayam Peraksi and Kelopak Dewa Langkasuka-Hilt of Keris Tanjung

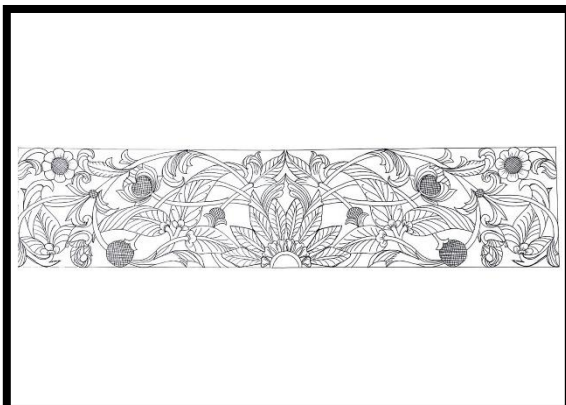


Fig. 6 Daun Dala Motif-Awan Larat Exhibited at Desa Ukiran Kayu, Besut

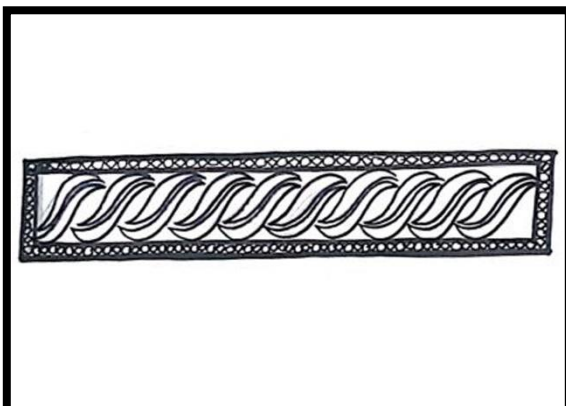


Fig. 7 Itik Pulang Petang Motif-Rumah Gadang

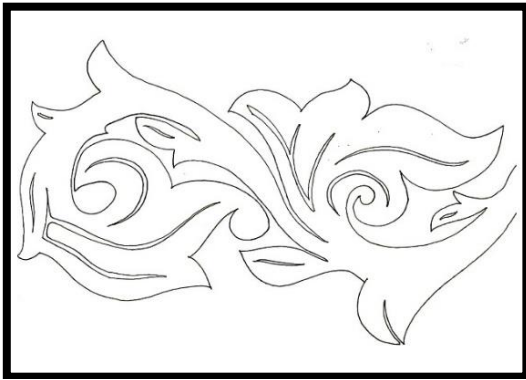
The Itik Pulang Petang motif is derived from the scene and shape of a row of ducks going back to their pen at dusk. Being a constant sight in the natural settings of the Malay environment, this sight has inspired its own patterns. Adhering to Islamic teachings, the shape of the walking ducks then simplified to resemble leaf-like motifs ([Haron et al.](#)) The Itik Pulang Petang is one of the 28 fauna motifs from the 94 motifs observed on the Rumah Gadang of the Minang people in West Sumatra. The Rumah Gadang was first built in the 13th century and the current structure was rebuilt in 1976. The particular motif is carved into vertical lines on the gable end of the Rumah Gadang. The vibrant color of red, blue, green and yellow used were said to be influenced by Chinese brocades, a class of richly decorative shuttle-woven fabrics.

The Minang people have their own philosophies regarding the motif of Itik Pulang Petang, one of them being they should adhere to their leader as the ducks follow behind their leader. It also signifies a degree of discipline and conveys the sense of togetherness, solidarity in society as well the essences of Minang culture that does not easily waver under any circumstances just as the ducks that doesn't go through significant change in the shape of their body even after laying eggs and exposed to the muds, contrary to the chicken. The motif varies according to the five ethnics of Batak in North Sumatra, namely the Nandailing, North Tapanuli (Toba), Simalungun, Karo, Dairi Pakpak and Central Tapanuli. Itik Pulang Petang are one of the motifs used on the Batik clothes as well as Pucuk Rebung, Semut Beriring and Itik Pulang petang. Itik Pulang Petang is derived from the shape of a row of ducks going back to their pen at dusk. Adhering to Islamic teachings, the shape of the ducks is simplified to resemble a leaf-like motifs ([Shuaib and Enoch](#)). There is also other adaptation of the motifs in which it is evolved into a simpler rectangular shape to better suit the contemporary style.

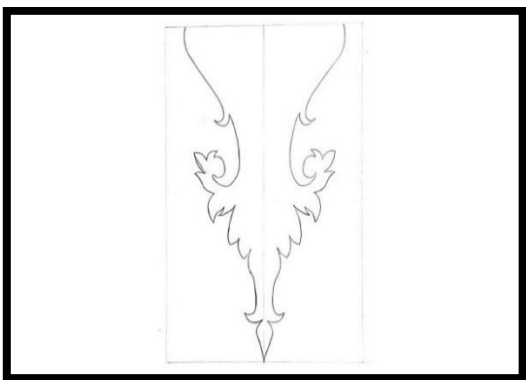


**Fig. 8** Keluk Pakis Motif-Awan Larat Wood Carving





**Fig. 9** KeluKeluk Pakis Motif - Rumah Riau



**Fig. 10** Kepala Cicak Motif-Wooden Andeh Andeh Carving

The Kepala Cicak motif was chosen as a product to preserve. It is influenced from Demak kingdom on 1515. Sultanate Demak is the third in Nusantara and fourth Southeast Asia. The Kepala Cicak was nailed to the corner of the Perak traditional house roof. It became the design to finishing or complementary to tumpu kasau or papan cantik. The lizard head's eye was carved in large cut outs. It was believed as if there is a sleepless creature in the house with big and watchful eyes to scare the spirit away. It functions just like a warrior taking care and guarding the house from thief. It also symbolised strength, courage and gave encouragement to the house owner according to the Batak's relief. Lizard symbol not only used in the old Malay architecture but it also uses in pantun; cicak disana sini, cicak sarang bergulung rotan, adik disana saya disini, macam burung sahut-sahutan, in 'perumpamaan'; cicak berak kapur and children song. Islam has prohibited figurative art, but this had been stylised. This animal motif was chosen to remind the people that sometimes it is fine to use a particular animal's behaviour for a lesson in a daily life.

## Conclusion

Malay motifs and geometric patterns represent the Malay valuable treasures and in the era of globalization inherit, the research on their form and meaning must be continuously documented for the generation of the future. This paper is about creating

salient references which explained the undeniable magnificent motifs comes from Malay Archipelago which had been documented, reformed its mold from the perspective of educational industry by understanding literally and conceptually through imitating the finest extensive design motifs in order to hold its continuity of sustaining the motifs.

This paper is part of the continuous effort by Applied Arts' and Design programme IIUM to create the salient references which explained the undeniable magnificence of motifs comes from Malay Archipelago which come from their closeness with natural landscape. These had been documented, reformed and moulded into motifs in architecture and interiors from the perspective of educational industry, the continued understanding of these motifs literally and conceptually is needed. One must evolve the simplest into the finest extensive design motifs in order to hold its continuity of sustaining the culture of the Malays in Nusantara.

This documentation in digesting the glimpse of aesthetic features and methods of the Malay motif and Islamic geometric pattern as a whole in Malaysia and Indonesia, specifically and as to the whole world generally will contribute towards the basis of Malay identity not only of the Vernacular Malay House, public realm, but of garments, artefact ornamentation, artefacts, utensils and even from fabrics and wallpaper finishing pattern on the walls, flooring and furniture. It is important to understand and recognize the role of motif in Malay woodcarving and Islamic Geometric pattern that can allow its existence to prevail for future generation. The research is to explore students to document and visualize carved component is influenced by types of flower, floral motif, animal and geometric pattern. The component from various types of arts were transform from the masters original to artistic presentation by another carver. i.e "Documentation Malay Motif and Geometric Islamic Pattern Throughout 1950 To 1960's" during which the projects required the students to research, recorded, and documenting the chosen motifs under the year allocated as a field of sustaining research of preserving the data collection of the exquisite forms and patterns of the motifs.

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