

Cultural Ecology of Tai-Khoen Villages in Chieng Tung

Ornsiri Panin and Den Wasiksiri

Abstract

This research paper focuses on the interrelationship between ecology, way of life, and dwellings of Tai-Khoen people in Chieng Tung province, Myanmar, in order to identify the sustainable qualities of their villages that may be used to develop concepts for future village-layout planning and design of the built-environment.

The approach places emphasis on field surveys of the physical environment based on the contextual framework of individual case studies and comparative studies of Tai-Khoen villages at Ban Nong-O in the district of Chieng Tung, Ban Maow and Ban Yang-Lo in Yang-Lo district, and Ban Den-Jang, Ban Laaw and Ban Sieow in Gad-Fa district, Chieng Tung province, in order to ascertain the association between the plan of the villages, the ecology of the environment, the physical characteristics of the dwellings, the beliefs and local customs regarding the house, and the adaptation of lifestyle in keeping with the environment.

From the study it was found that villages over 100 years old still retain their original layout, way of life and social aspects of ancient traditional community. Management of water resources for consumption sympathetic with the ecological environment is still a factor of major importance in relation to the physical layout of each village. The plan of the villages reflects the society and its way of life whilst kinship type of social structure and community spirit of sharing remain strong.

More recent villages however have been affected by changes, and their layouts have been based mainly on grid-patterned road network and infrastructure system. This in turn brought about social

changes to the communal way of life as common public spaces and shared outdoor spaces between houses begin to disappear. Nevertheless, traditional wisdoms of the ancestors that have been passed down through the generations are still highly respected especially with regards to social customs and culture. According to their values, Tai-Khoen people prefer not to marry those outside their own ethnic group and therefore the spirit of ancient traditional community and way of life regarding family ties and sharing with one another, have been able to remain deeply rooted. Although the grid pattern has been adopted for the layout of their villages, the character of their dwellings however, are still strongly traditional due to their deeply ingrained beliefs, and hence retain the elements of sustainable architecture that is in harmony with the environment.

Keywords : Cultural ecology, vernacular architecture, Tai-Khoen Chieng Tung, local wisdom, ancient community, sustainable architecture

Purpose

This paper is part of a comparative study of vernacular Tai-Yuan (Tai-Yavana) and Tai-Khoen houses in Thailand with those of Tai-Khoen in Chieng Tung, Myanmar, which is a sub-topic under the main research on “Local Wisdom, Development and Relationship Between Thai and Tai Vernacular Houses: Sustainable Quality in Vernacular Houses” funded by Senior Scholar Thailand Research Fund for a three-year period from 2002 to 2005. The main research investigates the connections between vernacular Thai houses in Thailand and those of the Tai ethnic groups outside the Kingdom. It focuses on the interrelationship between ecology, the way of life and dwellings of the people in order to seek answers pertaining to the qualities of the built-environment that are characteristics of sustainable architecture in the Thai-Tai houses which could lead to developing design concepts for architecture and built-environments in future.

Objective

The object of this paper which involves field survey of Tai-Khoen villages and houses in Chieng Tung province of Myanmar is to look at the influence of ecology on the layout of the villages and study their physical components and characteristics.

Scope of work

1. Study related documents on Chieng Tung: its origin, history of the settlement, economy, governing system, the province and its architecture.
2. Undertake field survey of villages in Chieng Tung province taking into account physical aspects concerning the character of each village in relation to its ecology, the character of the dwellings and their components.
3. Interview the villagers in order to obtain information on the background of each settlement, beliefs, customs, way of life, major and minor occupations, and changes in their way of life which brought about overall changes.

Study Sites

The sites under study involve six villages in three districts of Chieng Tung province: *Ban Nong-O* in the district of Chieng Tung; *Ban Maow* and *Ban Yang-Lo* in Yang-Lo district; *Ban Den-Jang*, *Ban Laaw* and *Ban Sieow* in Gad-Fa district.

Problem Statement

This study sets out to find answers to the following questions: “What is the extent of interrelationship between ecology, topography and layout of the villages? Have there been any significant changes to the villages? If so, what influenced those changes?”



Fig. 1 Sites of field study

Method of Study and Frame of Reference

Considering the problem statement, the interrelationship between ecology, way of life, and local wisdom of the people need to be looked at in holistic terms. Therefore the framework for this study requires looking integrally at the general context, the individual case studies, and make comparative studies in which the primary interest lies in the physical aspects.

Results of the Investigation

Interrelationship between ecology, layout, and physical characteristics of the villages

Prior to undertaking fieldwork, a study of the topography of Chieng Tung from related documents indicated that the area has the form of a basin surrounded by high mountains. The landform outside Wieng Chieng Tung is that of varying contours - generally higher to the south and lower to the north, thus explaining why Khoen River flows northwards.

Such varied landform requires appropriate management of water-resource for agriculture and is considered to be an important factor influencing the layout of the villages. Each village relies on building dams to manage their agricultural water supply which in general, is the responsibility of the local authority overseeing the entire area including those in the vicinity of Wieng Chieng Tung itself. Villagers in turn, use basic folk knowledge to collect water in small reservoirs for their community and irrigate the fields via ducts and trenches. This rather simple system has also kept adjacent areas surrounding Wieng Chieng Tung fertile and excellent for growing crops.

Apart from dams, there are two other means of dealing with water needs of the communities. The most logical is to set up the community directly at the source of water supply such as a pond, lake, or river. Ban Maow village in the district of Yang-Lo for example is located beside Khoen River while Ban Den-Jang, Ban Laaw and Ban Sieow in Gad-Fa district rely on Laab River for their water supplies. Situating communities directly beside natural waterways however, has the risk of having to confront annual flood problems. Thus communities affected by long spells of heavy flooding, such as Ban Nong-O in Yang-Lo district, had to relocate themselves to their present locations in order to avoid the floods. As a consequence, virtually every household had to dig their own well in order to obtain water for consumption. This in effect, is the other means of dealing with their water needs.

The prominent features found to be common amongst all six villages studied were the community temple - which in the case of small villages, one temple may be shared by 2 or 3 villages; spirit shrine – this is usually built under a large tree within the village; community water-well; open communal spaces; and the clustering of houses. The number of dwellings in each village differs and may range from 20 to 70 units. These units cluster themselves into groups and where a group is that of an extended family and relatives, there is no fencing around each unit. Instead, fences are built around the entire cluster incorporating the shared open spaces. The compound



Fig. 4 Wat Ban Maow, Yang-Lo district



Fig. 5 Spirit shrine, Ban Nong-O, District of Chiang Tung



Fig. 6 Layout plan of Ban Yang-Lo, Yang-Lo district

From the plans of Ban Maow, Ban Laaw and Ban Yang-Lo, it can be seen that each village has its own community temple. In the case of Ban Maow which has been in existence for over a century¹, the layout has retained the character of an ancient community with some outdoor communal and public spaces still remaining. Ban Laaw and Ban Yang-Lo on the other hand are only about 40 to 50 years old², so subdividing land into private plots and putting up fences around individual houses have started to become common practice.



Fig. 7 Roofed village water well



Fig. 8 Private water well

¹ From an interview with Yai Kham Taeng (80 years old), #30 Ban Maow, Yang-Lo district, Chieng Tung province, 28th March 2004

² From an interview with Loong Yee (52 years old), Ban Laaw, Gad-Fa district, Chieng Tung province, 30th March 2004



Fig. 9 Layout plan of Ban Den-Jang and Ban Sieow, Gad-Fa district



Fig. 10 Layout plan of Ban Nong-O, District of Chieng Tung

From the plan of Ban Den-Jang and Ban Sieow in Gad-Fa district, it can be seen that linear development of houses has taken place along the new highway as well as along roads within the community. Ban Sieow is located directly by the highway and stretches all the way to Ban Den-Jang which is just a slight distance off the main road. The layout of the village has begun to take on the pattern of the grid system and houses have therefore been set out accordingly in a linear manner.

As for Ban Nong-O which is in Chieng Tung district itself and has only been in existence for about 15 to 20 years³ since its relocation to escape floods, the new community temple (Wat Nong-O) serves as the village centre. The temple is quite a distance

³ From an interview with Loong Sam Boon (80 years old), #63 Ban Yang-Lo, Yang-Lo district, Chieng Tung province, 27th March 2004

away from the main road and adjoins the community's cultivation land which makes it rather peaceful. However the plan of the village has been laid out in a grid pattern along with its infrastructure system before the houses were built and therefore it appears more like a modern housing community. The houses nevertheless, are still constructed in traditional manner. However there are several new houses adjacent to the main road that take on a modern style appearance with painted brick and concrete.

The layout of the dwellings in relation to the plan of the village

From the broad study of 177 houses in 6 villages which, to reiterate, are Ban Nong-O in Chieng Tung district; Ban Maow and Ban Yang-Lo in Yang-Lo district; Ban Laaw, Ban Den-Jang and Ban Sieow in Gad-Fa district, 20 were chosen for further in-depth study.

The study revealed that the general layout of the houses did not differ much from each other. The fundamental components of the layout are the main dwelling unit, the kitchen - which may be either incorporated into in the main unit or simply attached, rice storage shed (granary), open space, vegetable patches, water well (or artesian well), toilet (outhouse detached from the main unit) and ample firewood storage space for use throughout the year. Every house regardless of size raises domestic animals such as fowls and pigs. Also common throughout all the villages studied are, in the case of houses occupying a large piece of land, fruit trees such as mango, olive, banana, and cereal crops - such as corn, grown for their own consumption within the household.

The layout of the dwellings in each village is a direct reflection of the way of life. In villages that still have the extended-family type of structure such as Ban Maow, Ban Laaw, and Ban Den-Jang, houses are clustered together in groups with minimal fencing, and occupants can walk freely past each other's house. Kinship in Tai-Khoen villages is either genuine through familial blood or otherwise established through familiarity and acquaintance

between families over the generations. For some groups, the bond through familiarity can be even stronger than genuine familial ties. This is typical of ancient communities with strong traditional social structure and can be seen reflected physically in the built-environment and morally in the way of life.

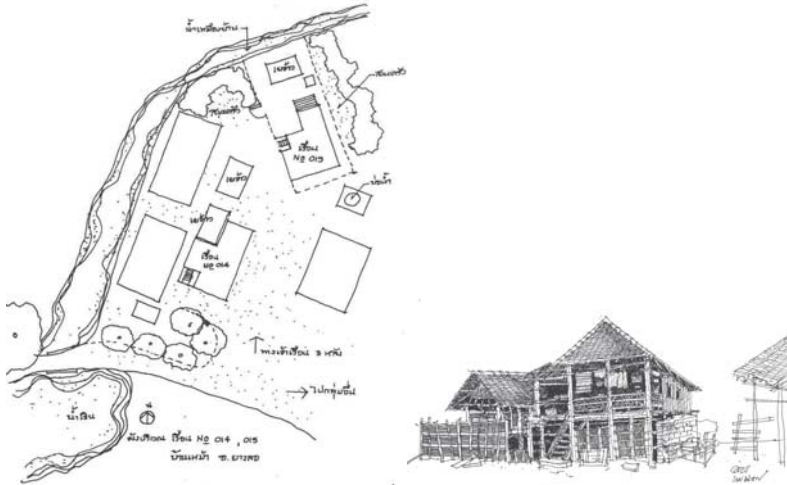


Fig. 11 Layout of house Nos.014, 015, Ban Maow, Yang-Lo district

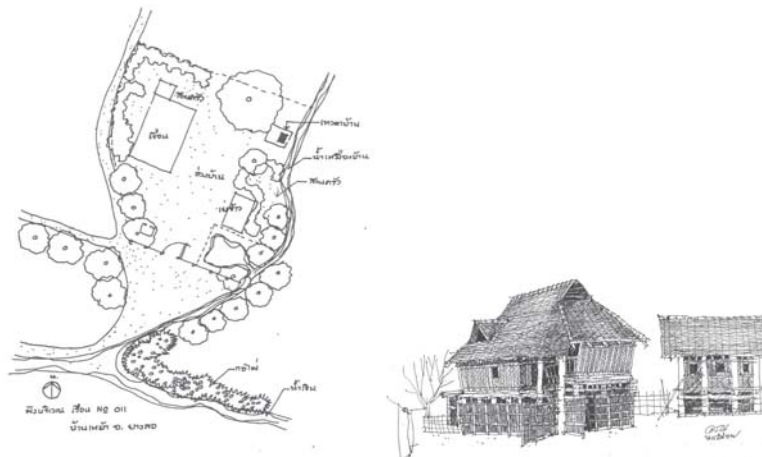


Fig. 12 Layout of house No.011, Ban Maow, Yang-Lo district

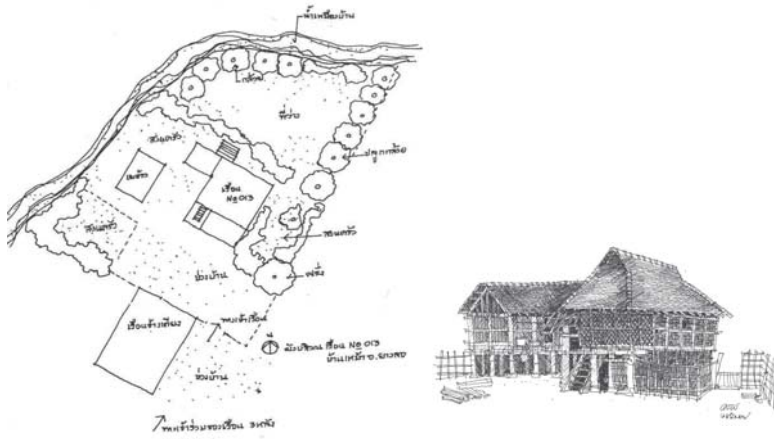


Fig. 13 Layout of house No.013, Ban Maow, Yang-Lo district

Figures 11-13 illustrate the layout of houses adjacent to manmade waterways or canals branching off from Khoen River in several tributaries through Ban Maow village. This is an excellent example of water resource management for agricultural purpose that effectively makes use of its advantageous natural environment. It can be seen that the many tributaries serve not only to channel rain water to irrigate the fields but also benefit the vegetable patches of each household as all three examples make full use of water from the streams for their kitchen gardens.



Fig. 14 House by the water

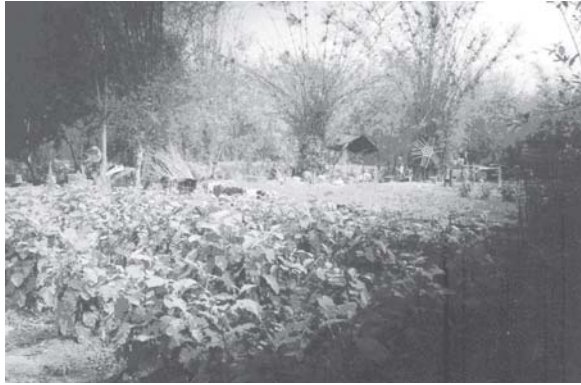


Fig. 15 Kitchen garden of house by the water

Houses adjacent to the main road and pathways within the village that are distant from sources of water, on the other hand, have to resort to digging ponds or wells to obtain water for their vegetable gardens and also for collecting rainwater (Fig. 17). Figure 16 is an illustration of a house in Ban Laaw, Gad-Fa district. The dwellings in this community rely on the slope of the contour to drain stormwater down to Laab River while water for their vegetable gardens has to be pumped up from artesian wells.

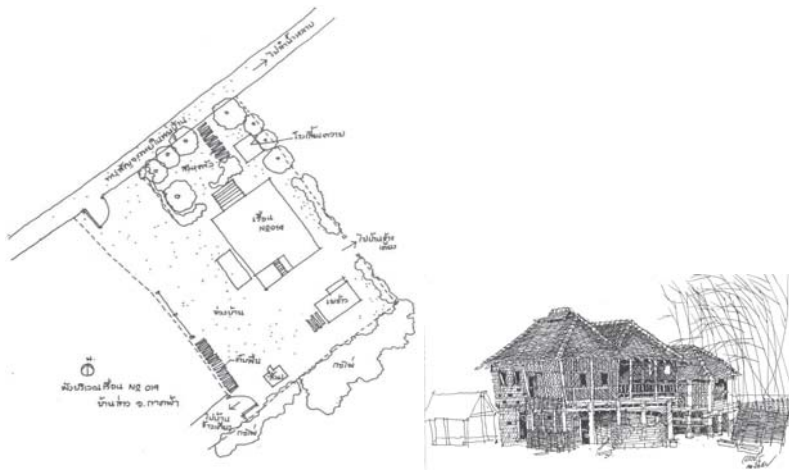


Fig. 16 Layout of house No.019, Ban Laaw, Gad-Fa district

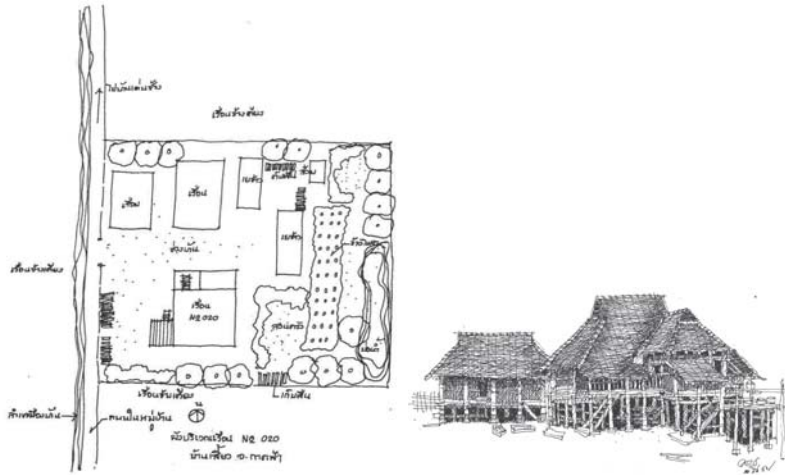


Fig. 17 Layout of house No.020, Ban Sieow, Gad-Fa district

Houses at the centre of the village normally have to face the problem of water supply and stormwater drainage more than those in other parts of the community. However most would take advantage of the natural topography and make use of the contours to direct water to the fields or to nearby waterways. Figure 18 is an example of a house in Ban Yang-Lo that uses water from an artesian well for consumption. As for stormwater, some are drained down to the fields that surround the community as the rest flows down to the small canal west of the village. Figure 19 is an illustration of a house at the centre of Ban Den-Jang village in Gad-Fa district. Laab River is at the border of the community and therefore houses at the centre of the village can simply rely on the slope of the contour to drain water down to the river.

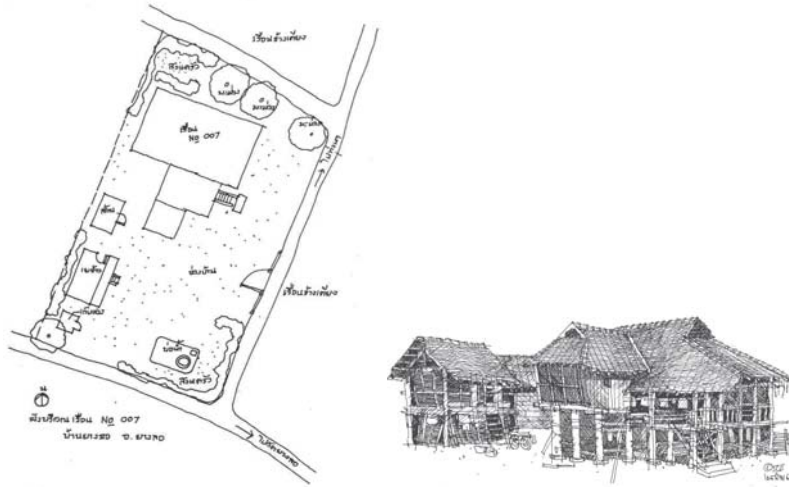


Fig. 18 Layout of house No. 007, Ban Yang-Lo, Yang-Lo district

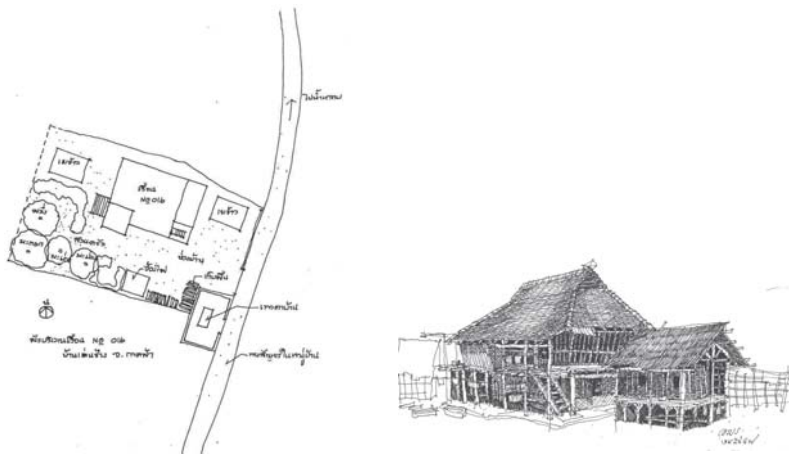


Fig. 19 Layout of house No. 016, Ban Den-Jang, Gad-Fa district



Fig. 20 House beside the main pathway: easily accessible but with less privacy



Fig. 21 House at the centre of the community surrounded by other houses

Conclusion

From the study which concerns looking at the interrelationship between the way of life, ecology, dwellings, and beliefs of Tai-Khoen people (in accordance with the problem statement), it was found that generally, the lifestyle and socioeconomic condition in all the villages surveyed still contain the elements of traditional ancient community that relies on folk wisdom as an instrument for adapting the way of life to suit the environment and thereby maintain harmony and balance. Thus in dealing with the issue concerning water, nature

and the natural landform invariably plays an important role. The extended family and kinship type of society in which members are considered to be related (either directly or assumed) still exists with people constantly sharing and caring for one another. Ceremonies and rites of passage practiced from birth to death are still community events in which everyone participates whilst beliefs regarding life and family are still held onto along with traditional religious beliefs which remain as strong as ever.

Subsistence lifestyle still predominates over the capitalist system that involves the middleman, and trading is done mostly through bartering or exchange of goods and agricultural products. It is the type of society in which people are not rich, yet never go hungry; full of community spirit and generosity not only towards each other but also extending even to strangers from the outside. Unlike Tai-Yais in China who intermarry with the Chinese⁴ and absorb Chinese culture into their way of life, Tai-Khoen people in Chiang Tung prefer not to marry outside their own ethnic group. This is perhaps why their ancient traditional way of life and beliefs have managed to remain so strong. From the fore-mentioned deductions, it may be further concluded as follows:

- For those villages that have well retained the values of ancient traditional society, it can be said that ecology topography and layout of the villages are all strongly interrelated. The natural environment and ecology are factors that determined the layout of the village, and dwellings were built before infrastructures had been introduced. In other words, roads appeared after houses were built, and therefore the dwelling clusters with shared outdoor spaces between them as well as the open temple grounds can still be seen distinctly in the layout along with pathways that meander through the village amidst the house clusters. In the case of villages that have only

⁴ Yos Santasombat, **Lak Chang**, Bangkok: Sarng-san Printing Co. Ltd., 2000, p. 19.

been set up relatively recently however, the introduction of new infrastructure system, particularly road network, has led to a grid-patterned plan laid out prior to houses being built. Consequently, the characteristic shared outdoor spaces between dwelling units of older communities have disappeared, leaving only the open grounds of the temple to be seen.

- The character of the dwelling units is associated with their layout in relation to the layout of the village and can be divided into 3 distinct groups: those adjacent to the source of water, those adjacent to the roads, and those at the centre of the village. From this it can be seen that waterways and roads are two major factors that clearly play influential roles in the process of layout planning in order to benefit as much as possible from both.

References

- Aronrat Vichienkhieaw (2537) “Laow Rueang Mueang Chieng Tung Mueang Phayak Lae Mueang Lane” in **Rueang Mueang Chieng Tung**, Bangkok : Suriwongse Book Centre, pp. 1-266.
- Becker, Alton L. & others (1981) **The Padaeng Chronicle and the Jengtung State Chronicle Translated**, USA : The University of Michigan.
- Peltier, Anatole Roger (1998) **Chieng Tung and Its Culture**, Chiang Mai, Wat Tha Kradat.
- _____ (2537) **Khaow Klom Soh Chieng Tung**, Chiang Mai : Ming Mueang Printing.
- Phanphen Krueathai (2537) “Rueang Mueang Chieng Tung Chak Kho-moon Tai-Khoen” in **Rueang Mueang Chieng Tung**, Suriwongse Book Centre, pp. 83-94.
- Prachan Rakpong (2537) “Taladnad Mueang Chieng Tung” in **Rueang Mueang Chieng Tung**, Bangkok : Suriwongse Book Centre, pp. 57-66.
- Prasert na Nakorn lae Kampuang TuiKeo. **Tamnan Mool Sasana Chiang Mai - Chieng Tung**, Ekasarn wichakarn samakhom prawatsastr mo po po.
- Prasit Liewsiripong (2537) “Tee Klong Rong Ram Nai Mueang Chieng Tung” in **Rueang Mueang Chieng Tung**, Bangkok : Suriwongse Book Centre, pp. 67-72.
- Rattanaporn Sethakul (2537) “Pra-phe-nee Sakkara-bucha Arak Ban Arak Mueang Chieng Tung” in **Rueang Mueang Chieng Tung**, Bangkok : Suriwongse Book Centre, pp. 51-56.
- Sirindhorn, Maha Chakri, H.R.H. Princess (2537) **Doi Tung, Chieng Tung**, Bangkok : Suriwongse Book Centre.
- Suphen Ritthphen (2541) **Khemarat Nakorn Chieng Tung**, Chiang Mai : Dow Compugraphic.
- Thawee Sawangpanyakoon (2527) **Tamnan Mueang Chieng Tung**, Panaek Anurak Lae Poeay Phrae Wannakam Lanna Dharmastan, Chiang Mai University.
- _____ (2535) “Chieng Tung” in **Warasarn Silpa Wattanadham** pee tee 4 chabab tee 1. Preusachikayon, pp. 184-192.

- _____ (2533) **Pongsawadan Karnmueang Chieng Tung**, Phim chaek pen battplee ngan phrarajathan plerng sop Chaomae Thippawan na Chieng Tung. Na Wat Suan Dok, 27 Makarakhom.
- _____ (2537) “Prawatsastr Mueang Chieng Tung” in **Rueang Mueang Chieng Tung**, Bangkok : Suriwongse Book Centre, pp. 27-50.
- _____ (2527) **Tamnan Mueang Yong**, Sathaban-wijai-sangkhom, Chiang Mai University.