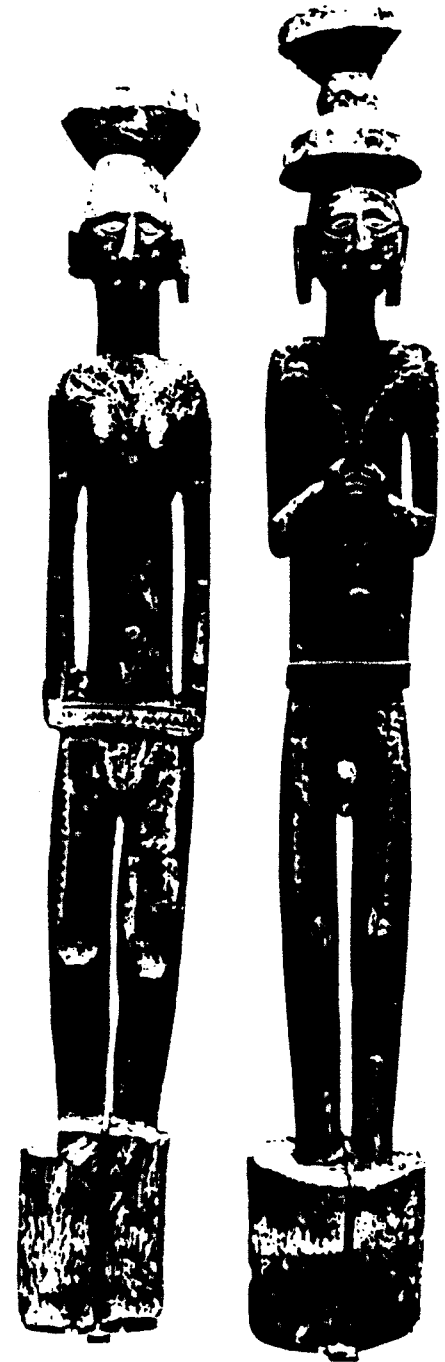


VERNACULAR ARCHITECTURE OF  
THE SOUTH PACIFIC ISLANDS AND  
THE EAST INDIES

IRWAN SUMARLIM



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# PREFACE

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I

I was born in Indonesia (the East Indies) and my parents are of Chinese lineage. Since I was raised in two cultures I have been afforded many opportunities to learn and experience cultural diversity. These experiences have made me very interested in the culture and the rich architectural traditions of the Pacific rim.

During my graduate studies in architecture at Oklahoma State University, I focused my studies on general practice and the design of the usual types of structures common to modern architecture. In an attempt to gain experience working in a climate similar to my own, I chose to research, program and design a headquarters complex for America's Cup Marina 1990 in Hawaii as my terminal project. I felt that the experience gained doing this terminal project would contribute to my future career in regionalist architecture. I felt that this important complex, both the client in Hawaii and the design should reflect the image of Polynesian culture and the traditional structures of the Pacific.

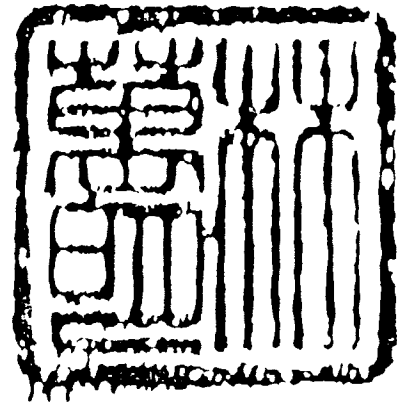
As my advisor and I began to research traditional Polynesian structures, we quickly discovered how little information was available to us. In an attempt to build a data base for the project many diverse sources both scholarly and popular and from the incomparable resources in Polynesia, the resources were collected from Bishop Museum Press, Honolulu, Hawaii.

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The material contained in this document is a part of the fulfillment of the requirements for the Master of Architecture degree at Oklahoma State University and is presented to Prof. John Bryant, thesis advisor and to the graduate faculty of the school of Architecture.

I hope that this book will be widely circulated and that it can serve as a reference for other architects who have the opportunity to design structures in the Pacific or Southeast Asia. Hopefully, someday, a more scholarly work can be assembled or published.



Iwan Sumarlim.

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# INTRODUCTION

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This book was developed from a scholarly study which was part of a terminal architectural design project in the Master of Architecture program at Oklahoma State University. I was privileged to be the faculty advisor for this project as it was undertaken by one of our most talented graduates, Mr. Irwan Sumarlim of Jakarta.

Mr. Sumarlim's project, a mythical Ocean Sports Complex, was to be located on a site on the southern coast of Oahu Island in Hawaii. During background research for this project, Mr. Sumarlim and I were shocked to learn that there has been no single general reference written on the traditional architectures of the Pacific Islands.

There have been, thankfully, a number of in-depth archeological studies which document isolated examples of the traditional architecture of the Pacific Islands. These studies were often published either by National Geographic or by the incomparable Bishop Museum of Honolulu. Although these meticulous studies are of great scholarly value, they are very difficult to access, even by scholars working through major university libraries.

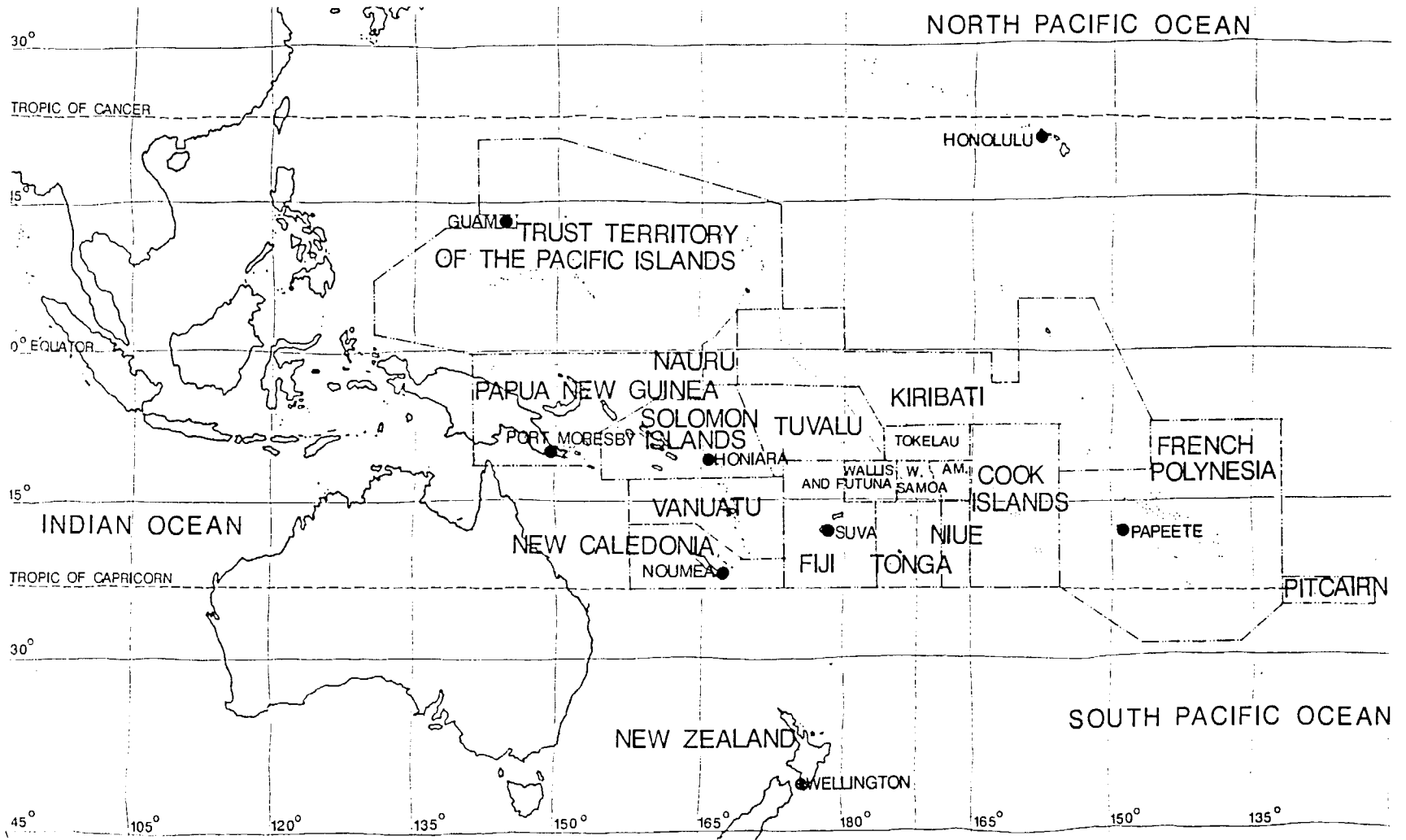
Both Mr. Sumarlim and I have a deep and abiding interest in traditional cultures and the vernacular architecture which they create. We, as most other architects, feel that it is essential to be fully aware of and sensitive to the traditional architecture of an area before we can create responsible architecture for the future.

Since no ready reference exists of the traditional architecture of the Pacific for use by architects and the general public, I encouraged Mr. Sumarlim to collect such information as was available from all of his disparate sources and at least make a beginning of a catalog of the architecture of the Pacific. As the Pacific Rim becomes more self-aware and as "development" and "progress" inevitably take place, possibly this modest book can serve as a guide and as a first step toward the badly needed full catalog of the Vernacular Architecture of the Pacific Islands and the East Indies.

John H. Bryant, AIA    Professor of Architecture    Oklahoma State University    April 1989

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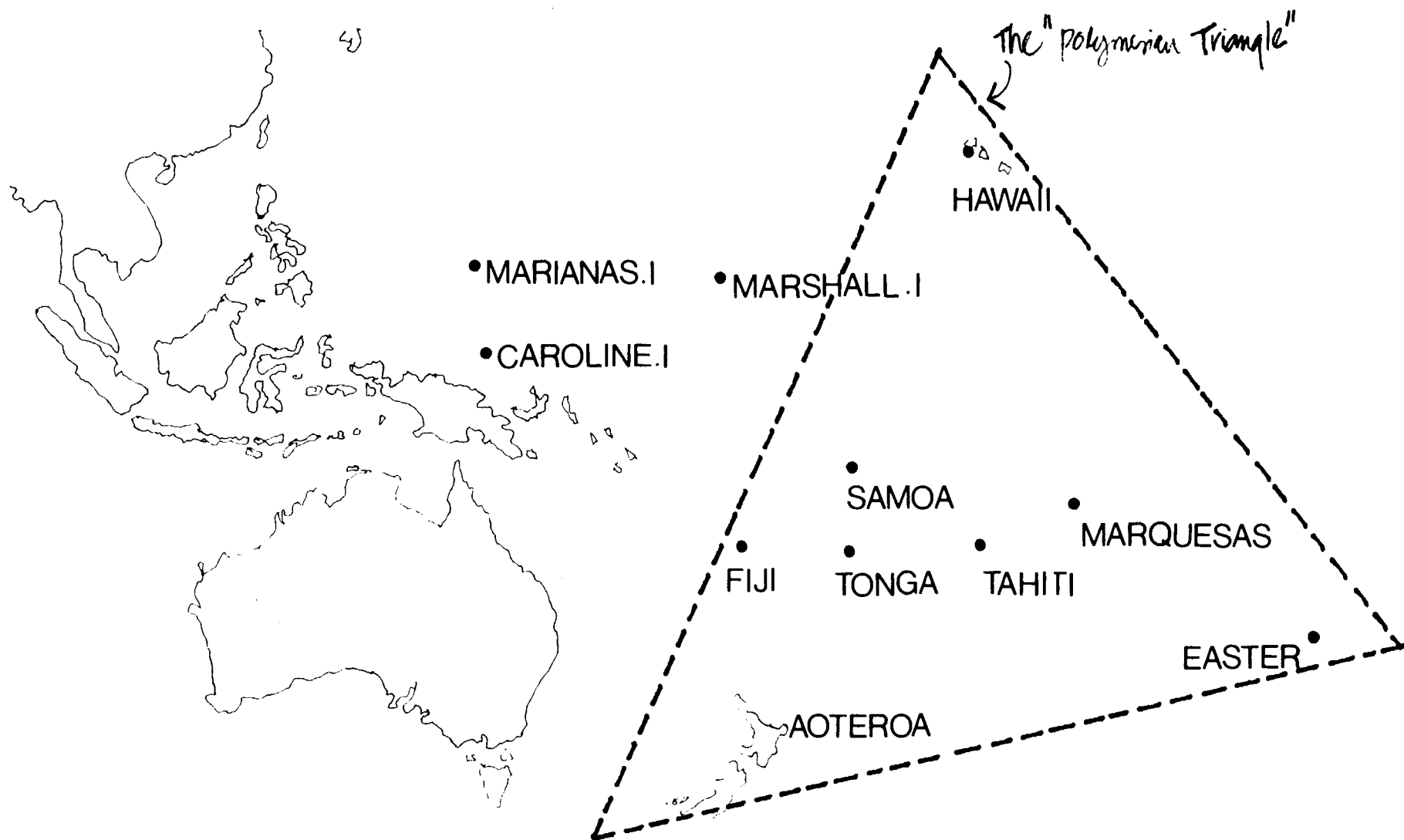
# PACIFIC ISLANDS



# POLYNESIA

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3





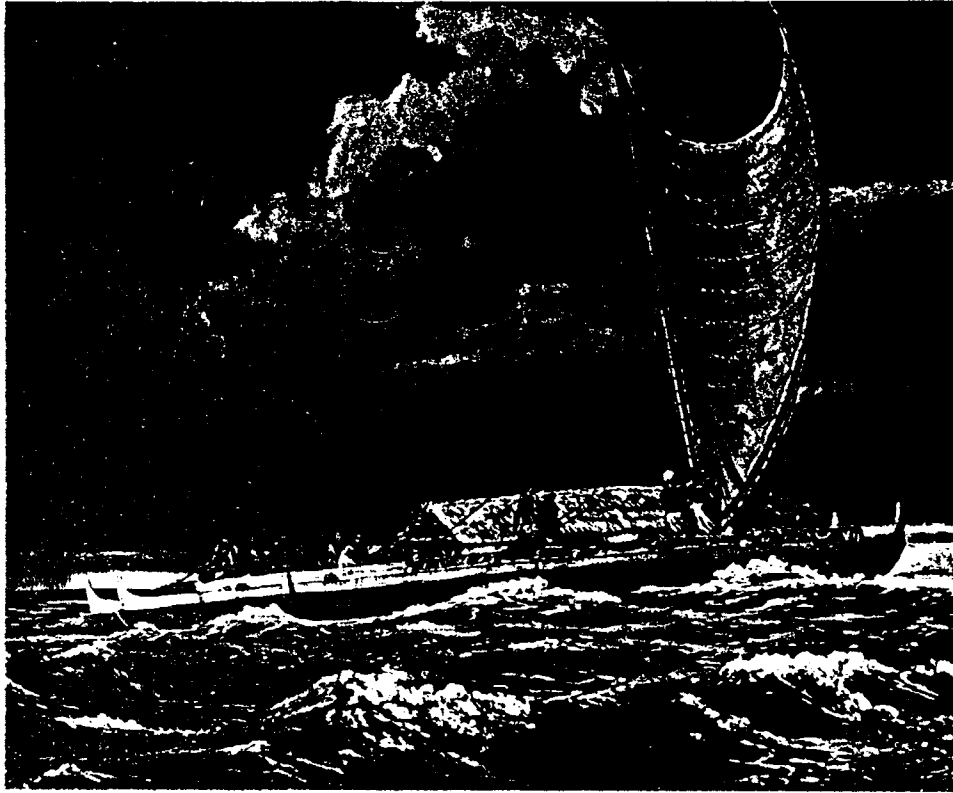
# HAWAII

4



Hawaii was settled in two migrations. The first was from the Marquesas Islands. The second, at a later date from French Polynesia. This fact has now been established beyond dispute by the scientists of the Bernice P. Bishop Museum in Honolulu. Further evidence of Marquesan and Tahitian influence was found thru the study of language, social political structure and the comparison of artifacts.

James Cook discovered Hawaii in 1778 and landed at Kauai, the people told him originally they came from Kahiki (Tahiti). At that time the islands supported large population of healthy, vigorous people. He traded with them before continuing his voyage to the Northern coast of the American continent. His orders were to search for a North-West passage and to establish if possible a suggestion that a strait divided the continents of...



Europe and Asia from America. It was proved, he was also to search for a North-east passage around the top of Russia.

Cook, with his two ships, the Resolution and the Discovery, spent the summer in executing the search and then in October 1778 returned to Hawaii to winter; to re-provision the ships with food and water and to overhaul the ships. Cook approached from the North-east and sighted the Island of Maui. then he cruised about the Islands trading until January 1779 when he was off Kealahou Bay on the big island of Hawaii. there, they were caught in a storm which damaged the foremast of the Resolution. The ships turned back and regained their anchorage on the 11<sup>th</sup>. On the 14<sup>th</sup> Cook landed to take the principal chief, Kalamiohu, hostage until.

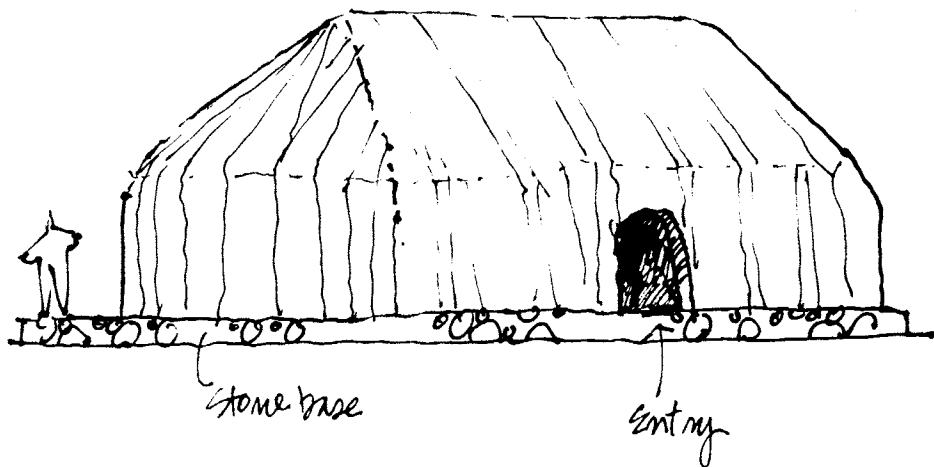


the return of a ship's cutter which had been stolen during the night. The Hawaiians opposed him. Cook shot a man, his marines fired. The Hawaiian charged. They killed Cook and five others, took their bodies away. and

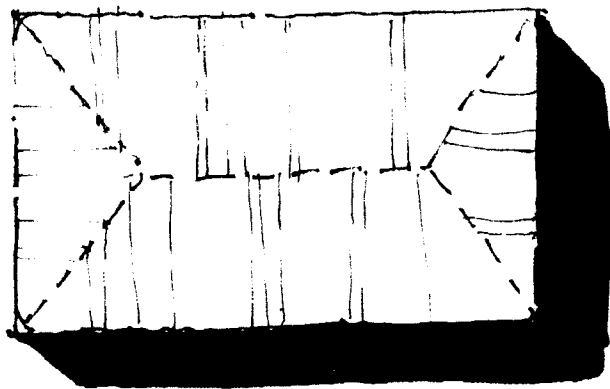
peace was restored several days later. Some of the remains of Cook were returned and were buried at sea in accordance with English custom. The Resolution and the Adventure sailed away. Thus ended "first contact" between the Polynesians of Hawaii and the cultures of Europe.

Hawaiian climate is subtropical  
 $100^{\circ}\text{F}$  ( $38^{\circ}\text{C}$ ) to  $14^{\circ}\text{F}$  ( $-10^{\circ}\text{C}$ )  
 the average temperature  $70^{\circ}\text{F}$  ( $23-24^{\circ}\text{C}$ ).

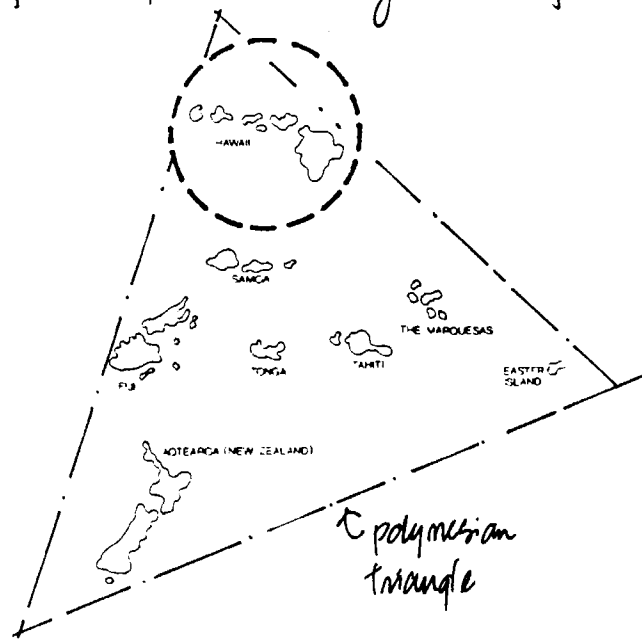
● grass house



● Roof  
Plan

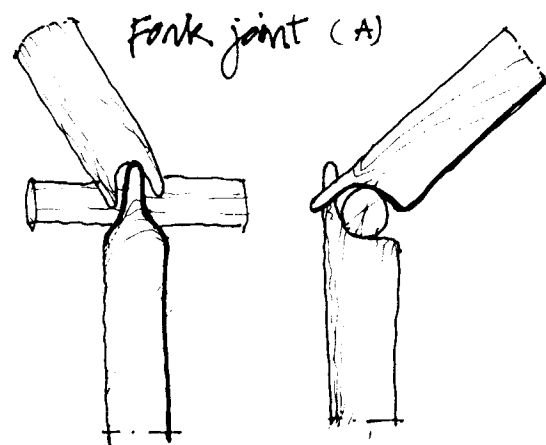
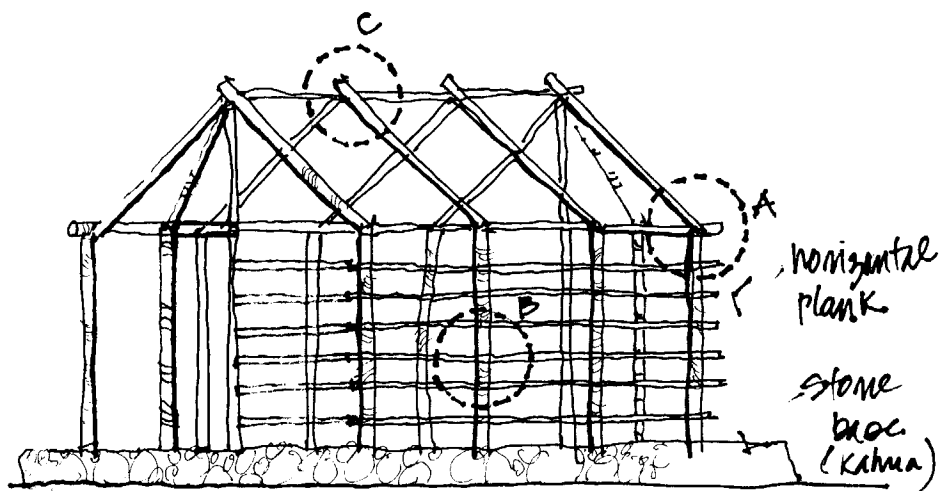


it is a hipped-roof house; the triangular portions of the roof above the walls at each end of the house slopes inward and up ward. This style of house, in historic times, of their prehistoric, gable-roof house.

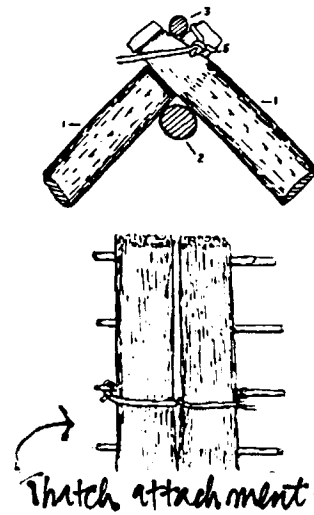
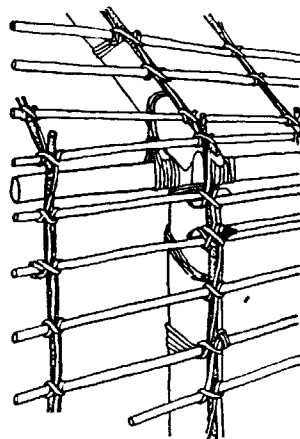


Catherine C. Summers. The Hawaiian Grass House. Bishop Museum publication 1966. P.P. 17.

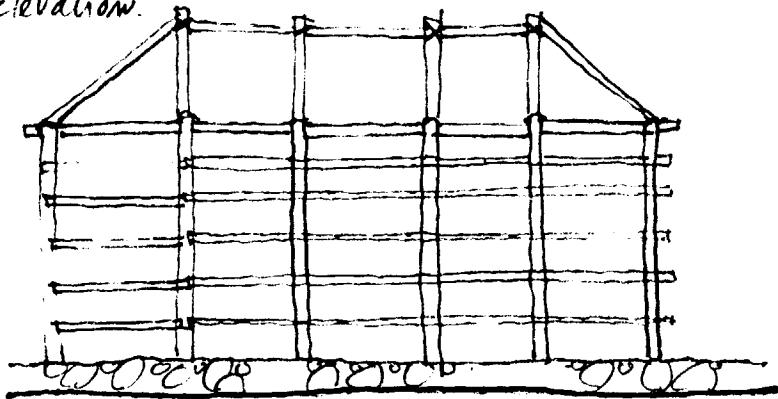
● Structure



clove-hitch joint (B) Ridgepoles joint (C)

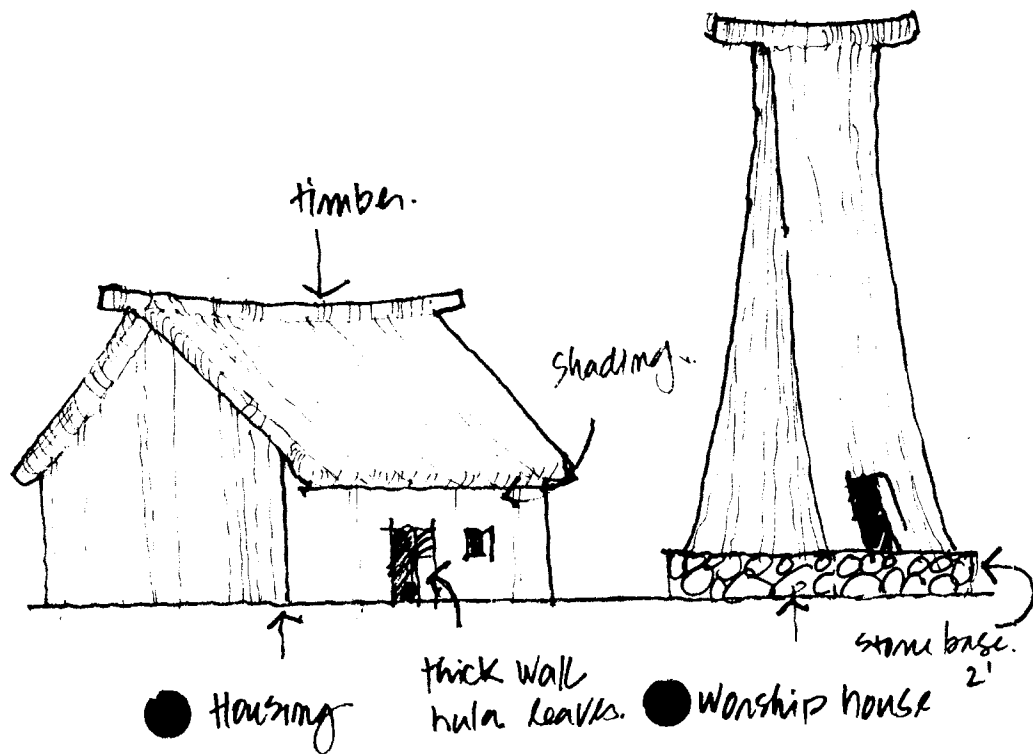


● Elevation



# FIJI

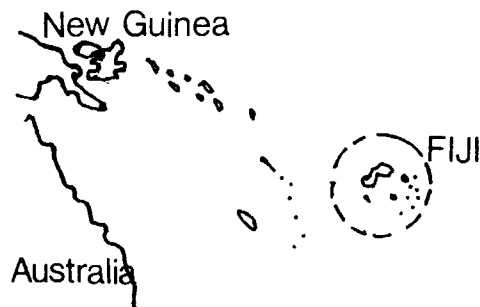
9



Indigenous Fijians are a mixture of polynesian and Melanesian resulting from the original migrations to the South Pacific.

Virtually all Fijians are Christian. 85% Methodist, 12% Roman Catholic, 70% Indo-Fijian are Hindu, 25% Muslim.

Geographically, Fiji comprises a group of volcanic islands in the South Pacific. They lie about 2775 miles southwest of Honolulu.



climate: Tropical maritime.



● *Fijian dancer*

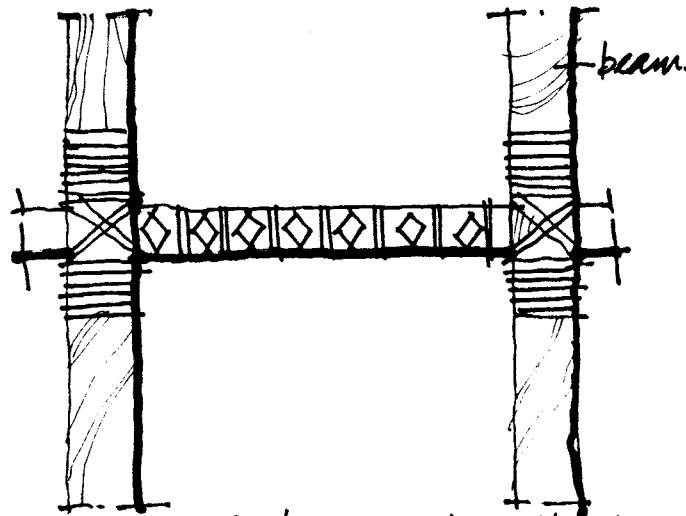


● *Fijian warrior*

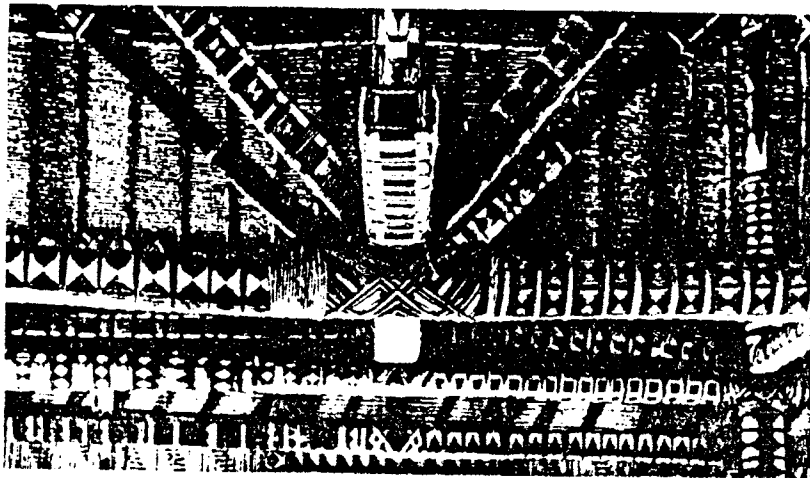


Model of house in reconstruction  
at Musée de l'Homme, Paris.

Interior joining system.



traditional truss work covered  
with colorful vegetable fibers.

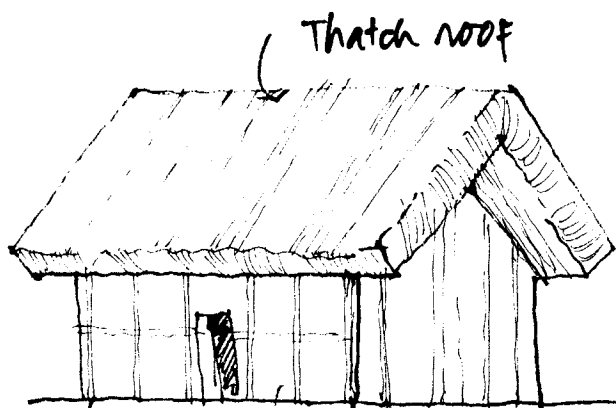




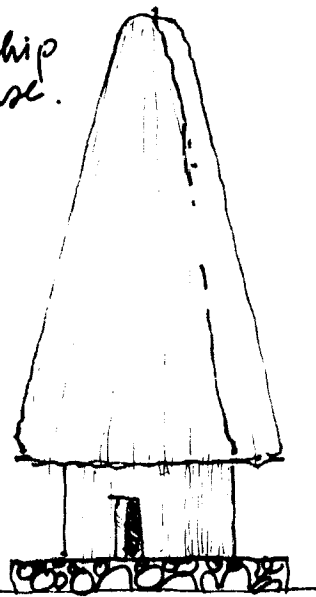
# TAHITI

● Family house

● Worship house.

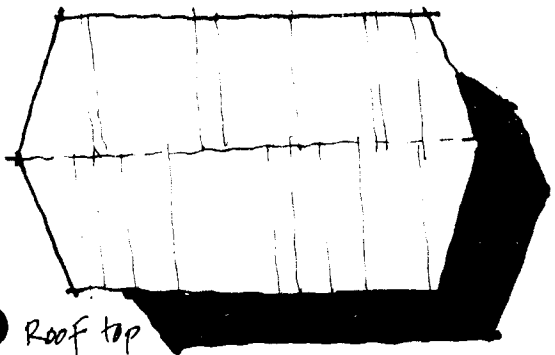


Thatch roof

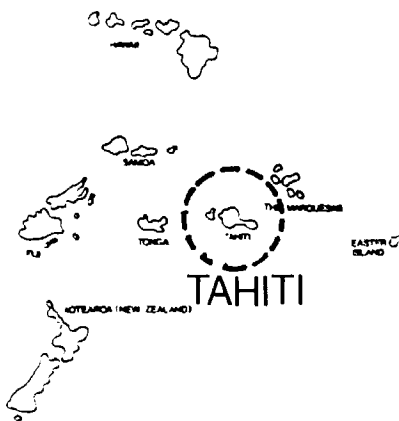


exposed  
structures.  
(Wood)

→ mats of Pandanus  
leaves.



● Roof top



Tahiti is the center of a large group of islands. The island were annexed by French and now are known as French Polynesia. This definition includes the islands of Tahiti, Moorea, Mahetia, Tetiaroa, Maiao and those to the leeward; Hauhima, Tahao and Bora. It also includes Tuamato atolls, the Austral Islands, Marquesas and the Papa Islands.

At the time of European contact, Tahiti had established itself as the most powerful and populous island of the group. It had surpassed Raiatea, which is being acknowledged as the former political and religious center of East Polynesia. Tahitian navigator-priests had sailed to discover Hawaii, the Cook Islands and New Zealand. They keep in touch with Samoa and Tonga.



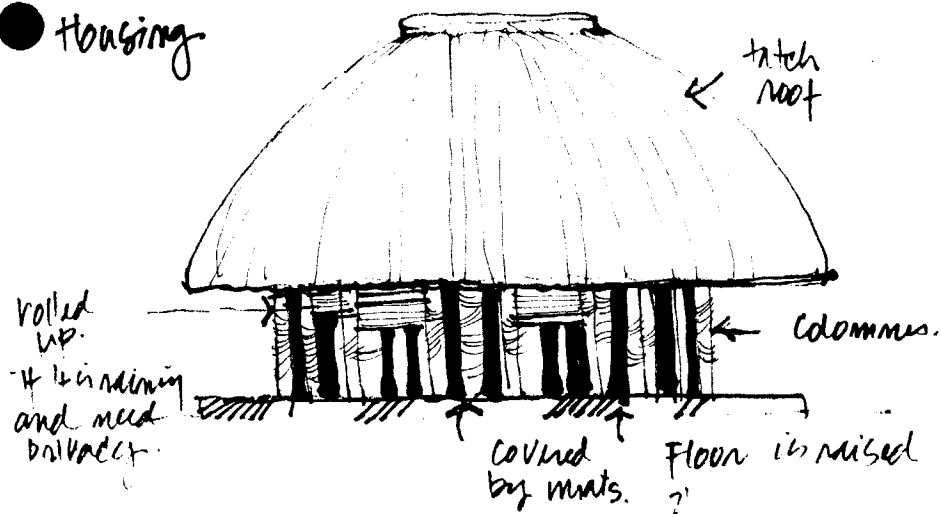
Tahitian are the attractive people, who made Captain Cook wonder at their versatility and added to the puzzle of their origin. Their immediate previous home was most likely Samoa.

temperatures average. 70°F.  
rainfall 305 cm (120 in).

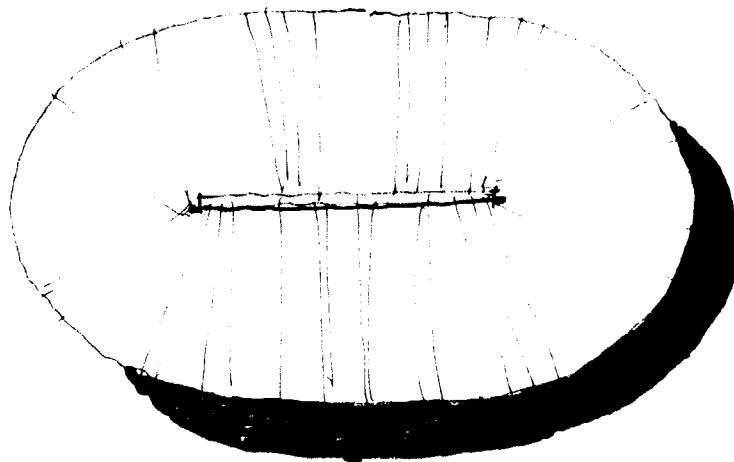
# SAMOA

14

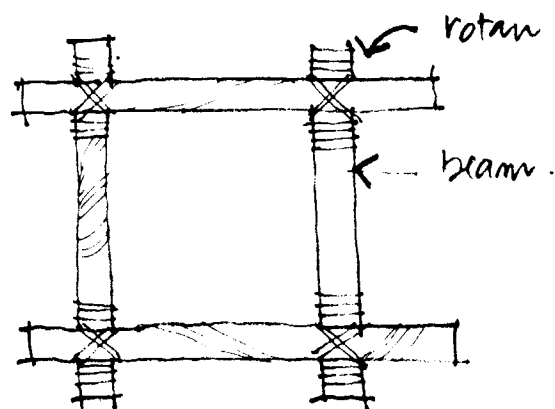
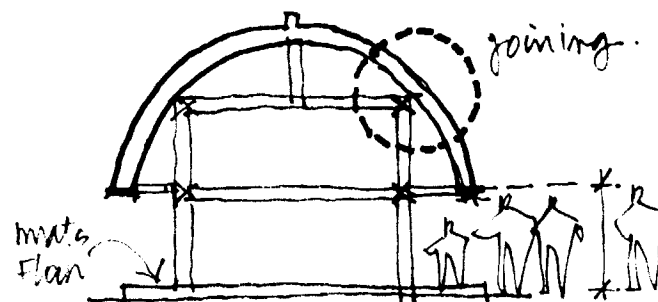
## ● Housing



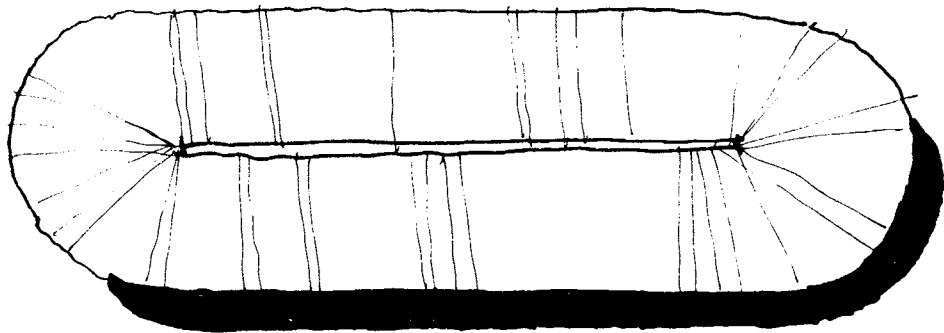
## ● roof top.



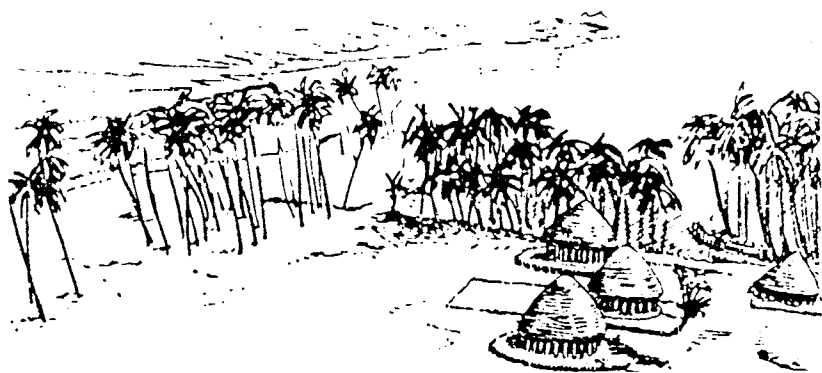
## ● joining system.



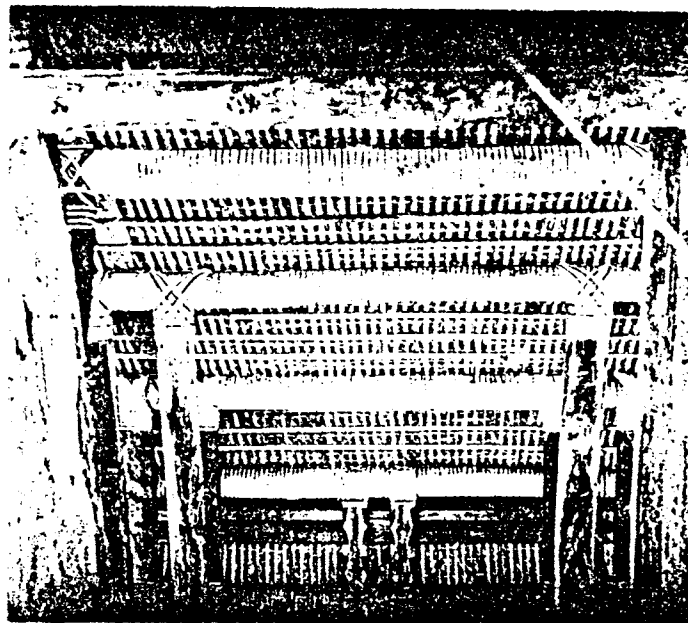
- different kind of roof (long).



- Aerial view



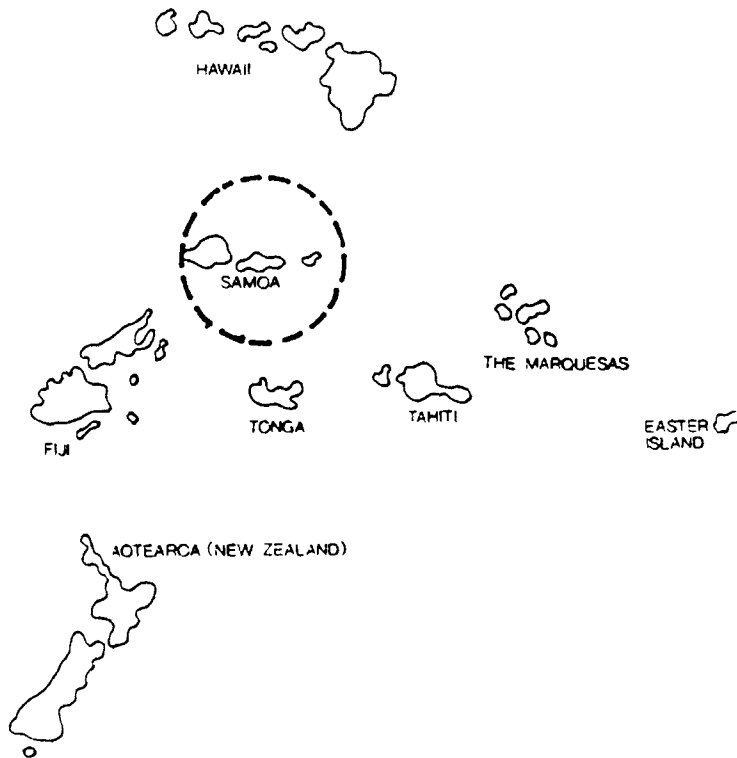
the fiber mats which constitute the walls can be rolled up inside or let it down to keep out of wind, rain, and to provide privacy!



interior detail.

The climate is tropical, with wet and dry season. The mean daily temperature is  $27^{\circ}\text{C}$  ( $80^{\circ}\text{F}$ ).

Average rainfall is about 287 cm (113 in) of which 190 cm (75 in) fall from October to March.

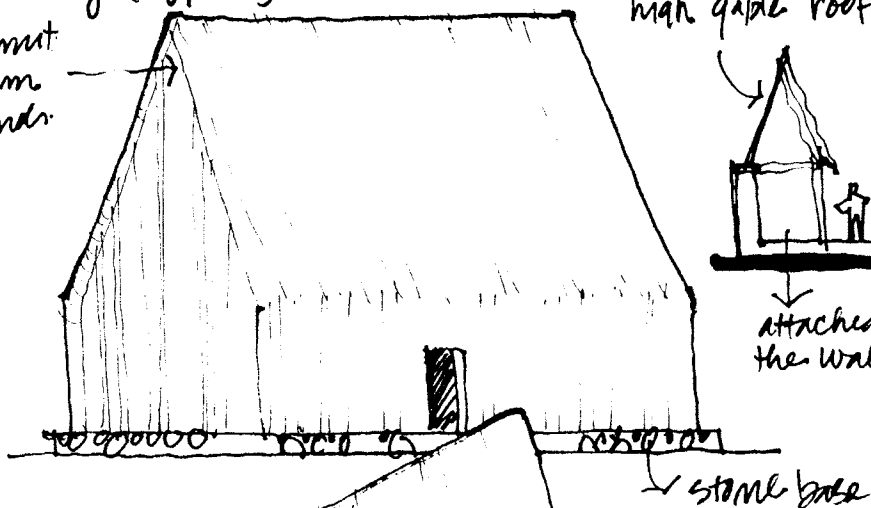


# MARQUESAS

17

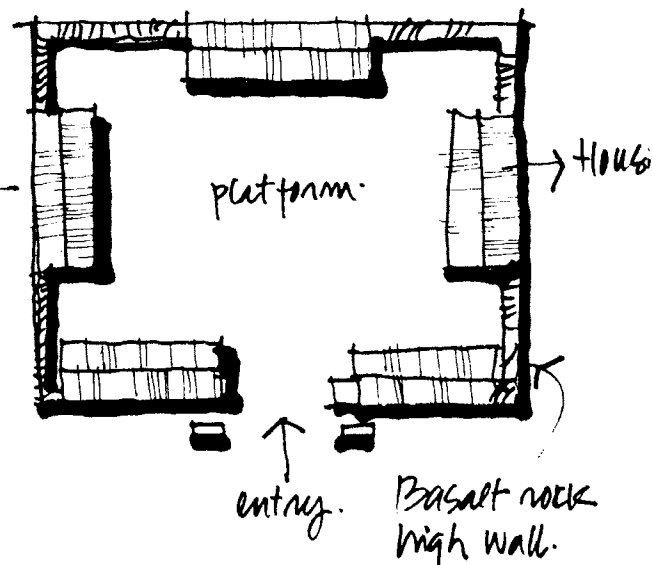
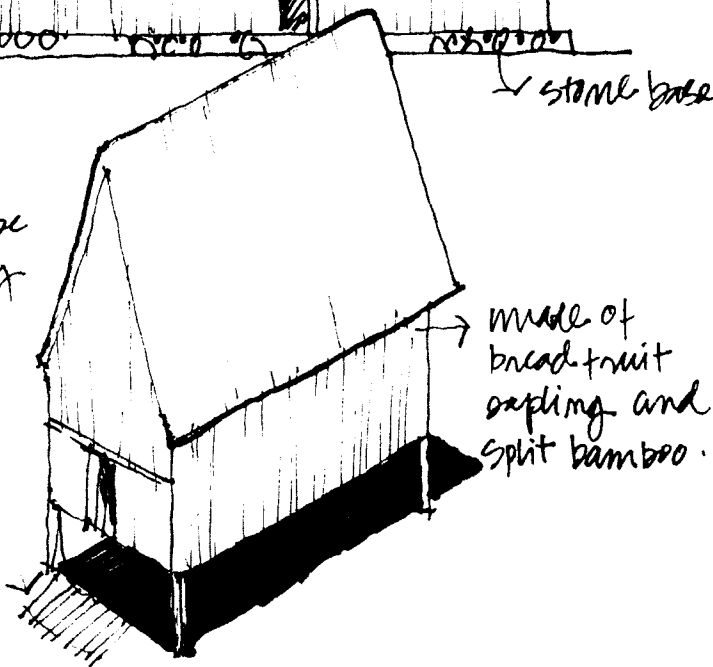
## ● Housing (typical)

Coconut  
Palm  
fronds



## ● another type of housing

Pae-pae  
Coconut  
leaves.



Marquesas island was found by Spanish in 1595 and named las Marquesas de Mendoza. Upon approaching the coast by a fleet of outrigger canoes crewed by 400 men whom the Spanish described as robust light skinned with blue tattoos, and long hair. Contact was the beginning of the end for the Marquesan people, foreign diseases, slave raids, opium, . . . .



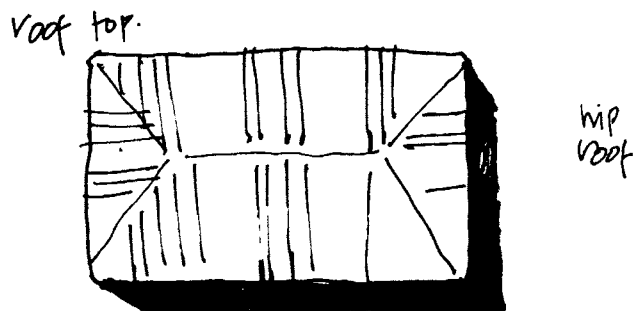
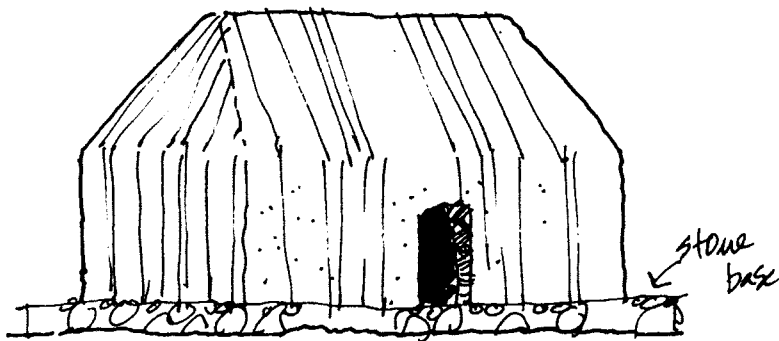
the continuation of their own warfare and cannibalism. Killed 95% of the population.

Marquesas Islands are today a part of French Polynesia.

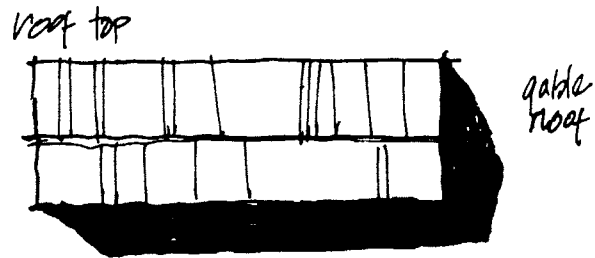
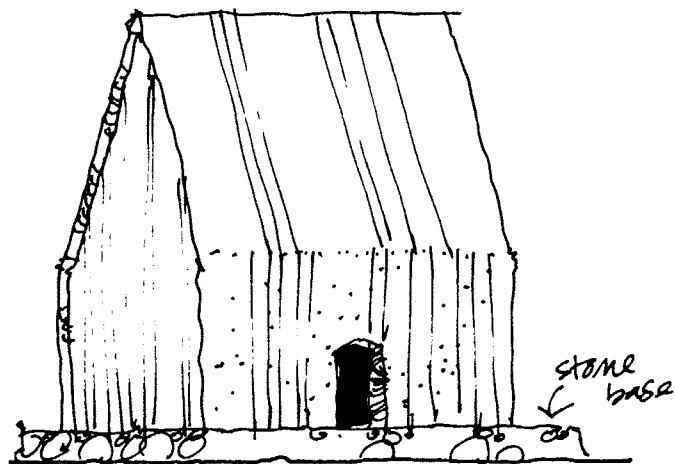
The family house is raised above the ground on the stone platform; a sign of the constant relationship between public architecture and private architecture, both exploited as evidence of its power by the dominant class. Often important for a family own house more than one hut.



- The difference between Hawaiian grass house and the Marquesas house.



- Hawaiian grass house.



- Marquesas house.



# TONGA

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## ● Family house



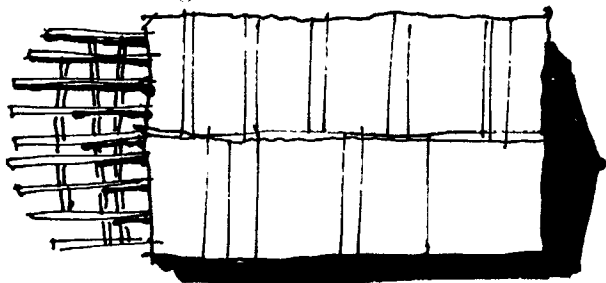
rolled up mats are used to avoid wind or rain

open

bamboo.

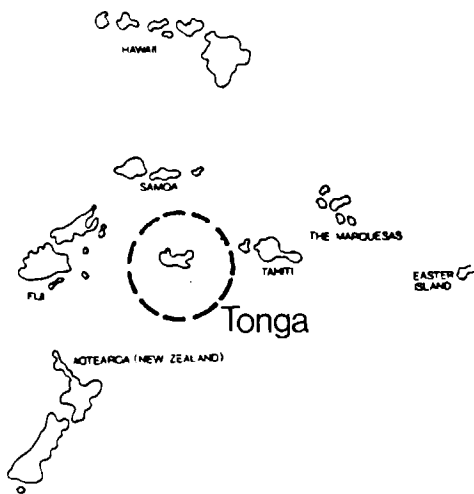
front porch made by leaves.  
space for social gathering, or  
family

## ● Roof plan



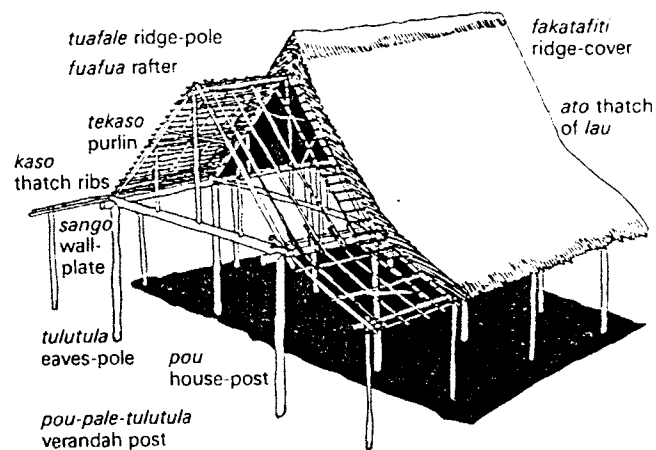
Tonga is an archipelago directly south of Western Samoa (Samoa). Its 169 islands, 36 of them inhabited.

The climate is basically tropical with a distinct warm period (December-April) during which the temperatures rise above  $32^{\circ}\text{C}$  ( $90^{\circ}\text{F}$ ) and a cooler period (May - November), with temperatures rarely rising above  $27^{\circ}\text{C}$  ( $80^{\circ}\text{F}$ ). Annual rainfall is 170 - 297 cm. (67 - 117 in). Daily humidity: 80%.





Tongans, a polynesian group with a very small mixture of Melanesian, represent more than 98% of the inhabitants. The rest are European, mixed European, and other pacific Islanders.

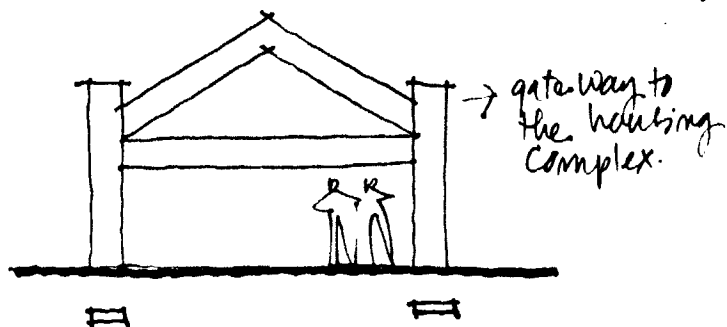
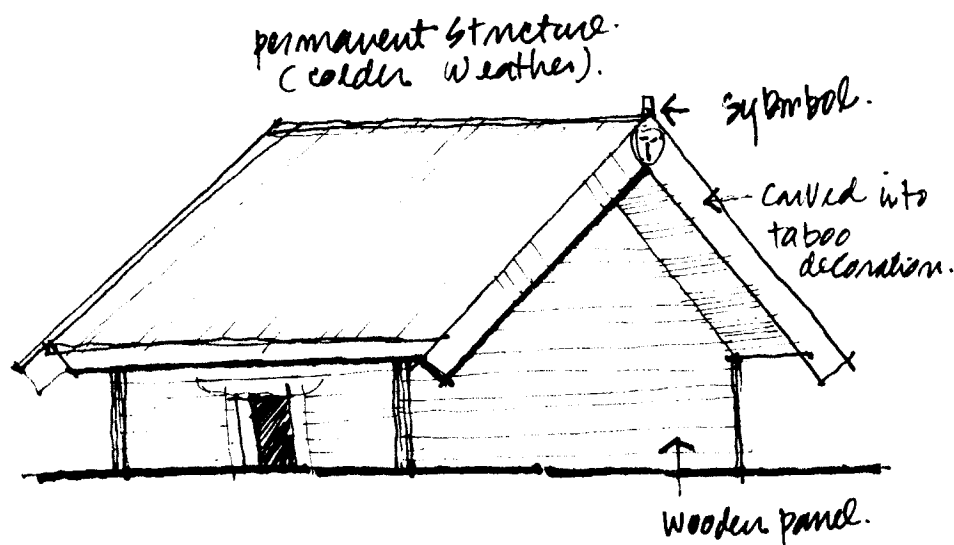


Family house built in modern way.

# AOTEAROA

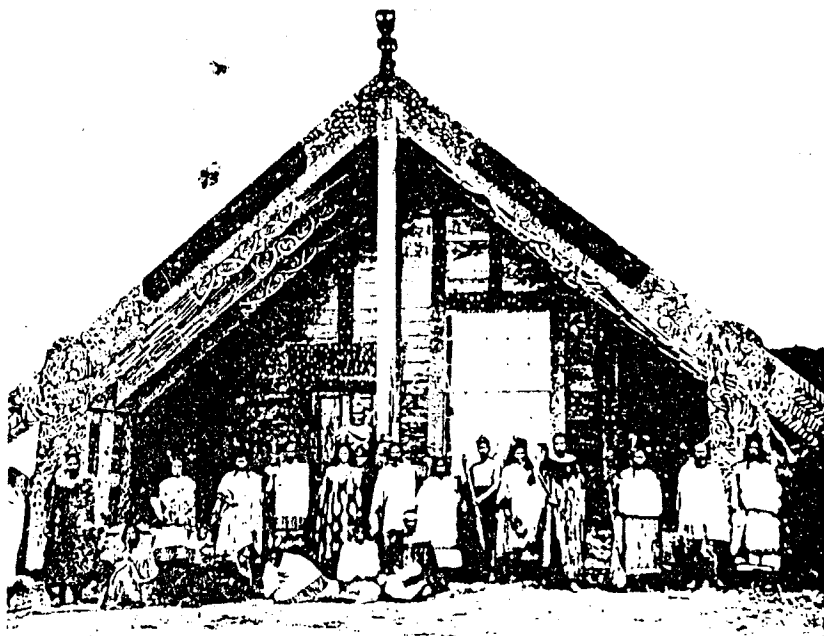
22

## ● family house



Tattooing is the source of inspiration. Sculpted figures are their symbolic key of communication. The display of sculpted figures / decoration spread over the structure of the building like a tattoo, covering every inch of facade.

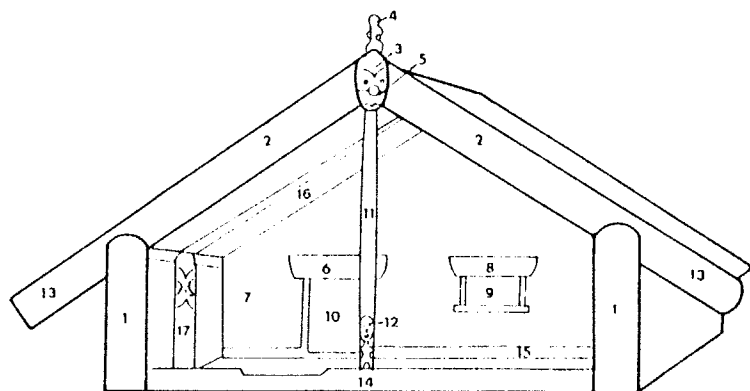
The motifs were drawn from myth, the decoration was not utilized to reinforce the unity and power of the clan or the equilibrium between different clans, instead, it was placed at the service of the family (hapu) as a result of unilateral control over the labor force and as a means of visual proclamation of the glories of the ancestors and of the direct descent from progenitor of the tribe to which the owner of the house laid claim.



Maori house, built at the end of  
19<sup>c</sup>

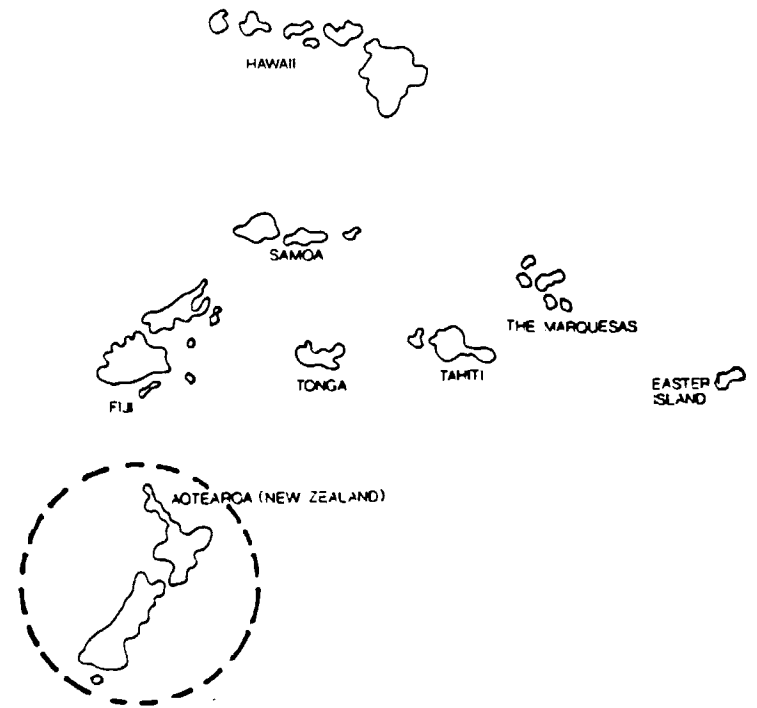
● Name of the parts:

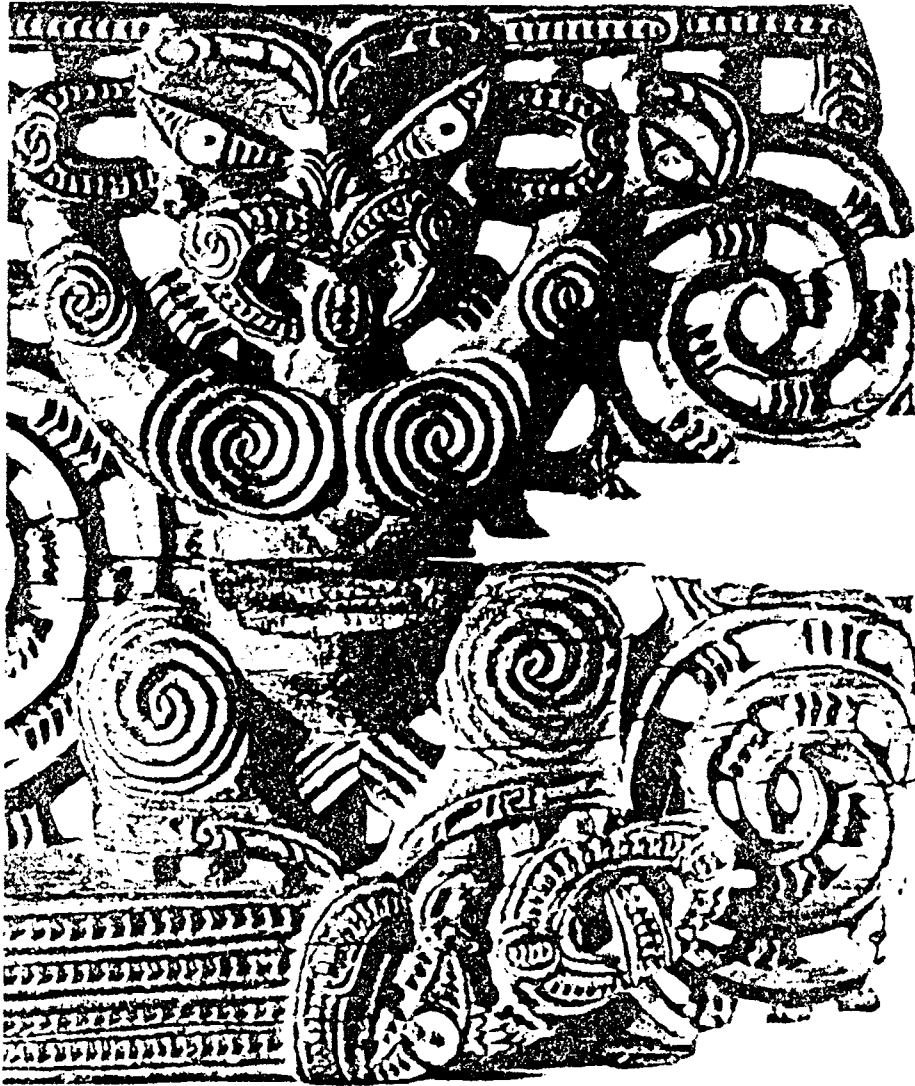
1. Amo-amo.
2. Maihi.
3. Korumu.
4. Teko-tekko.
5. Parata.
6. Maui.
7. Whaka-wai.
8. Korupe.
9. Mata pihhi.
10. Tahau.
11. poka.
12. Teko Ara.
13. Rapa. rapa.
14. pa. pa.
15. pa rapa.
16. Heke.
17. pa pa.





- Interior of house with carved wooden panels, painted beams, and panel of colored straw woven in geometrical patterns.





● Lintel of a house door.

From this wooden carved element,  
It is clear that the architecture  
uses the dimension of the human  
body as the measurement.

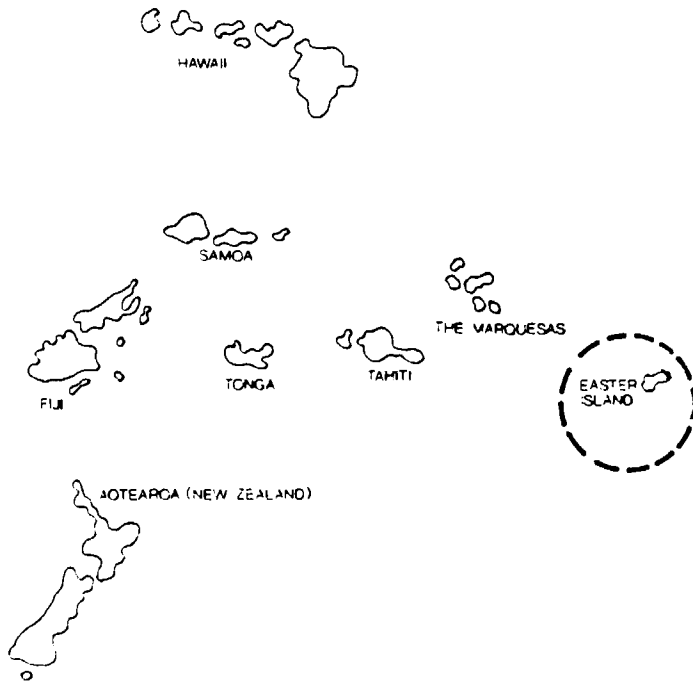
It is so easy to apply the artificial  
man-made universe for all the  
decorations.

"It is the human body that  
establishes the rules for the sacred  
measurements of buildings!"

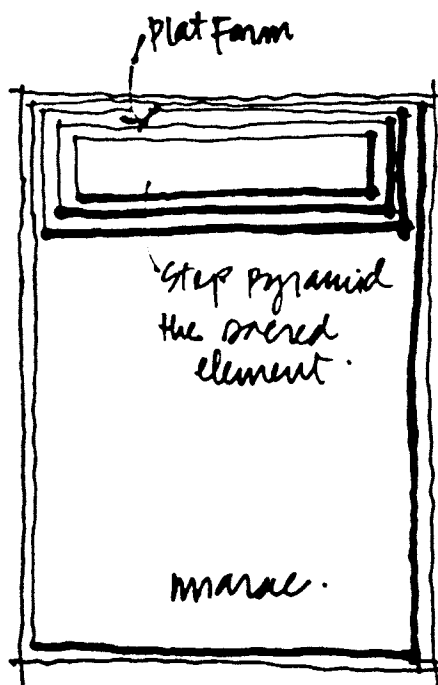
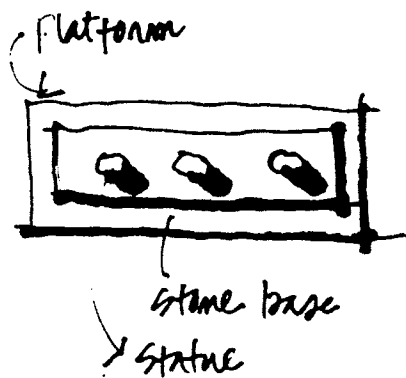
(Primitive architecture. PP.221)

# EASTER ISLAND

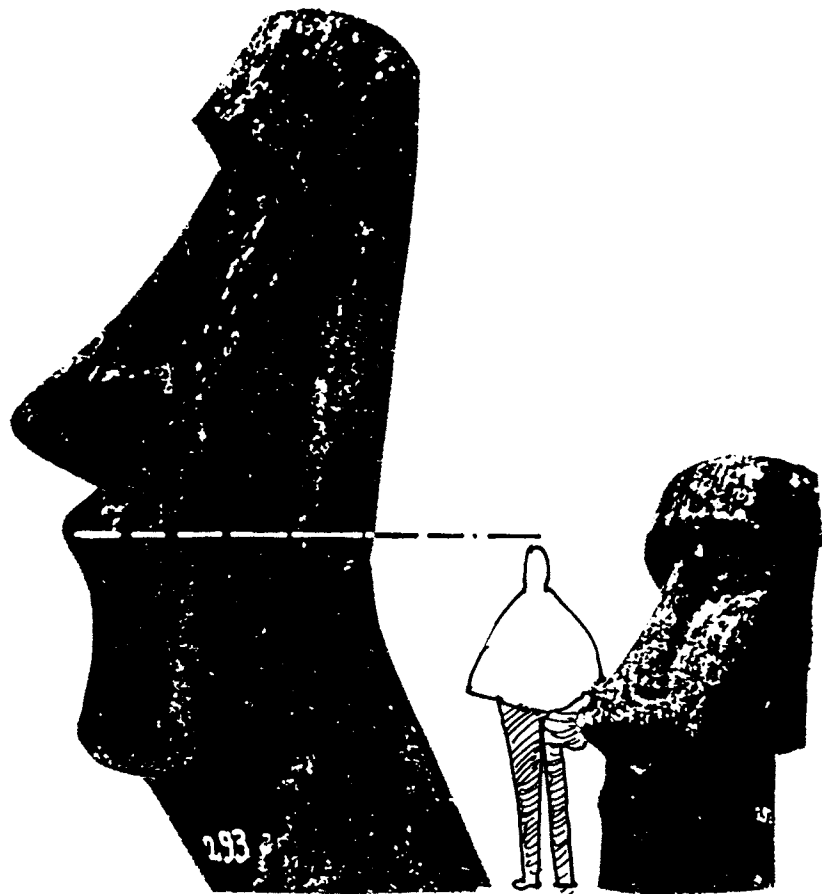
26



On Easter Island, the significant elements were found. The stone architecture of religious character. These edifices were more directly linked to the social life of the community. They call it sanctuary, the Marae, consists of an open rectangular plaza surrounded by a wall and terrace and containing at one end the ahu, a stepped pyramid that is the most sacred element. This is dedicated to God Oro in Opoa. In Easter Island mostly was found this religious place with the statues 14-25' high. These statues were the measurement of different authorities, the king and the class of nobles and priests.



● The statue of the Marae.



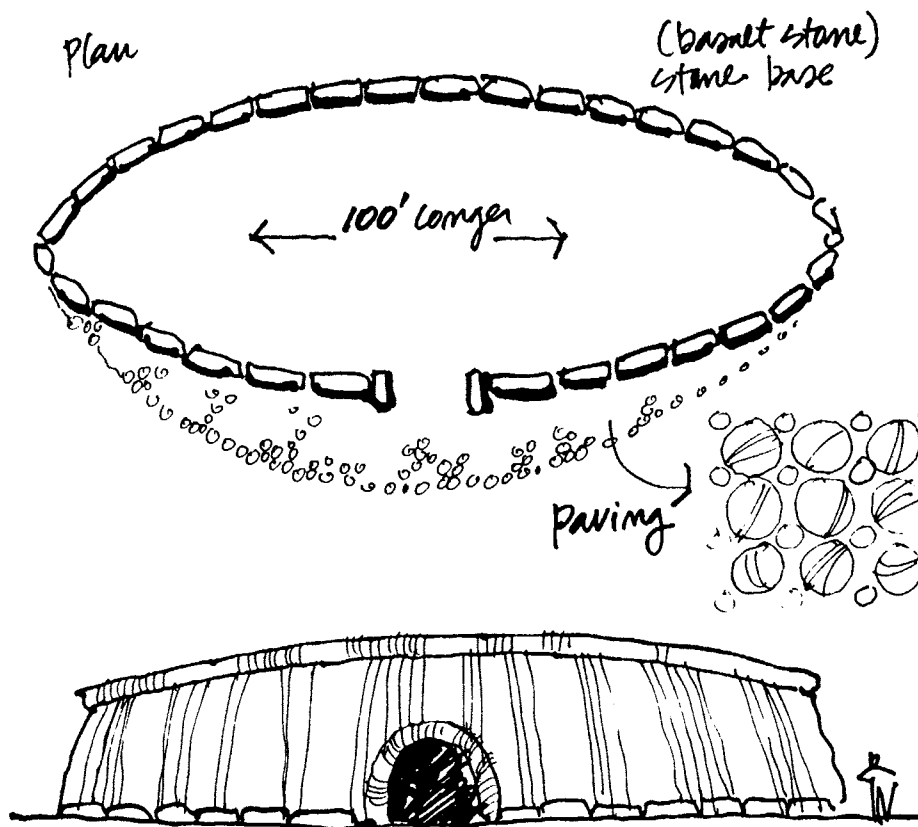
The height of the statue. approximately 15'

● marae:  
(social gathering)  
space





● Housing



Sometimes longer than 100'

Enrico Quidoni, *Primitive Architecture*, 1978. Rizzoli,  
Harry N. Abrams, Inc. N.Y. PP. 210.

House of a chief



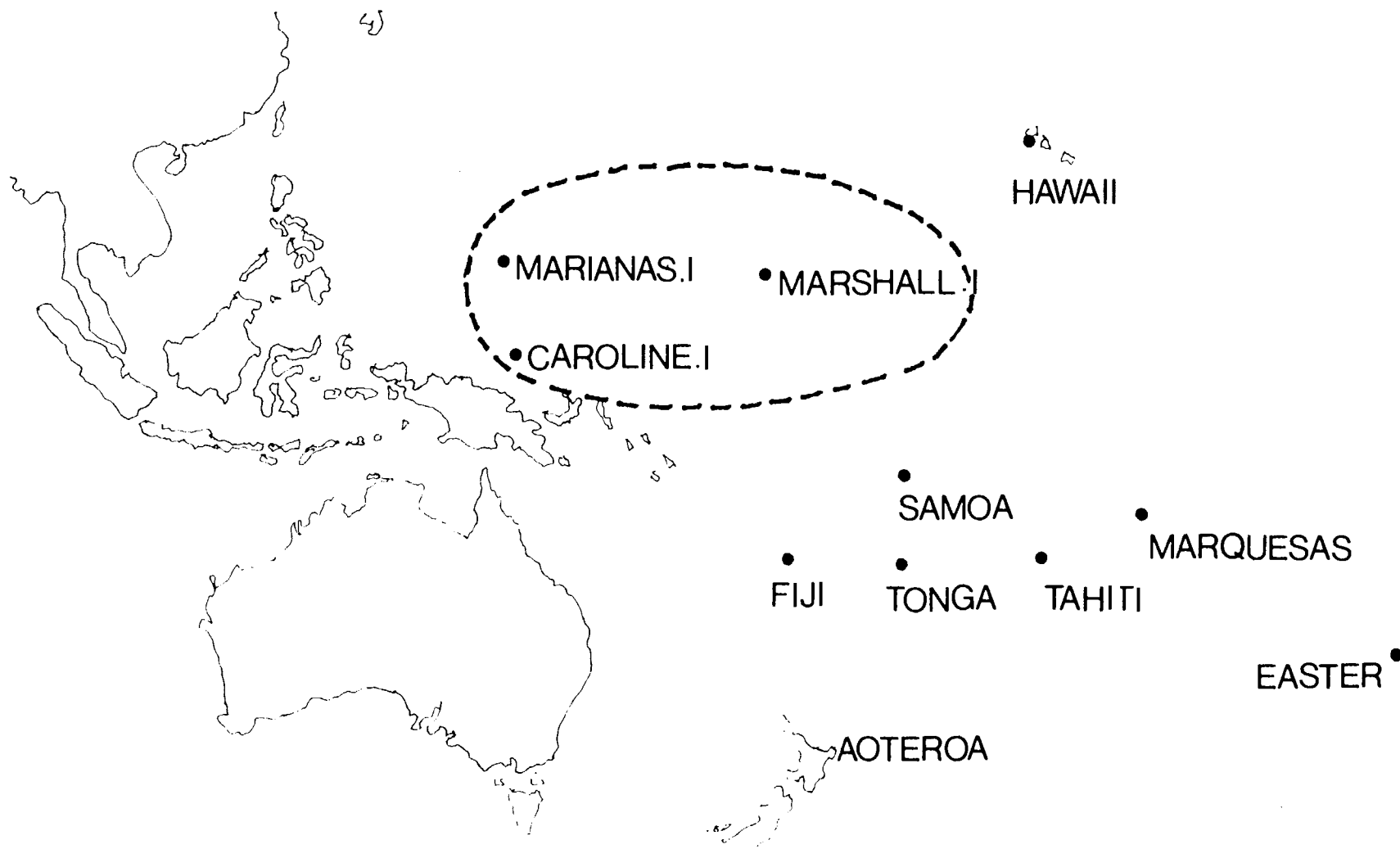
House foundation.



# MICRONESIA

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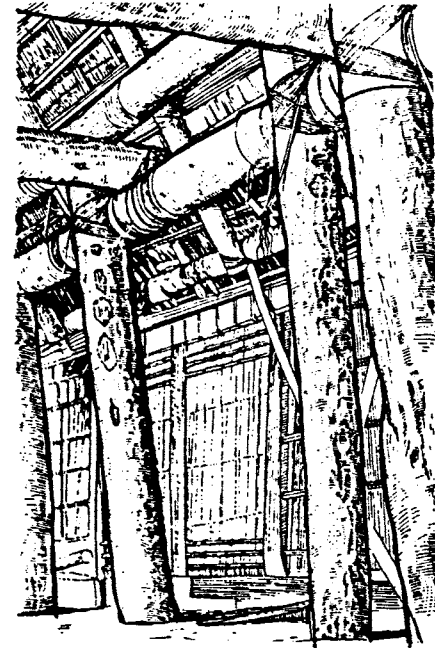
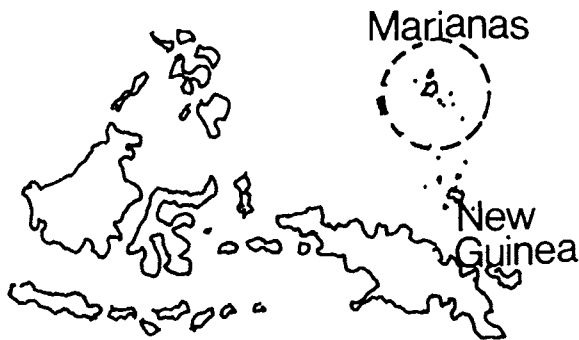
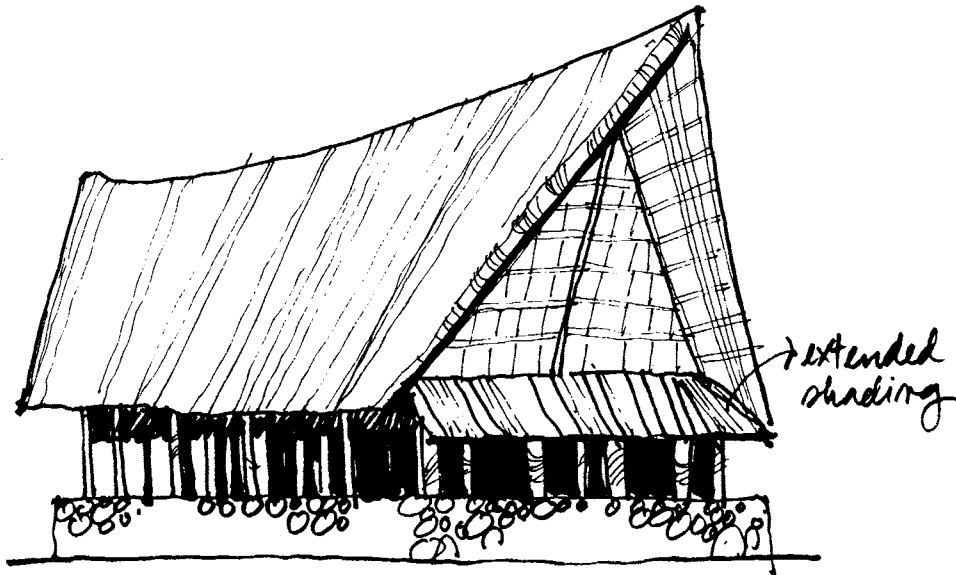
29



# MARIANAS

30

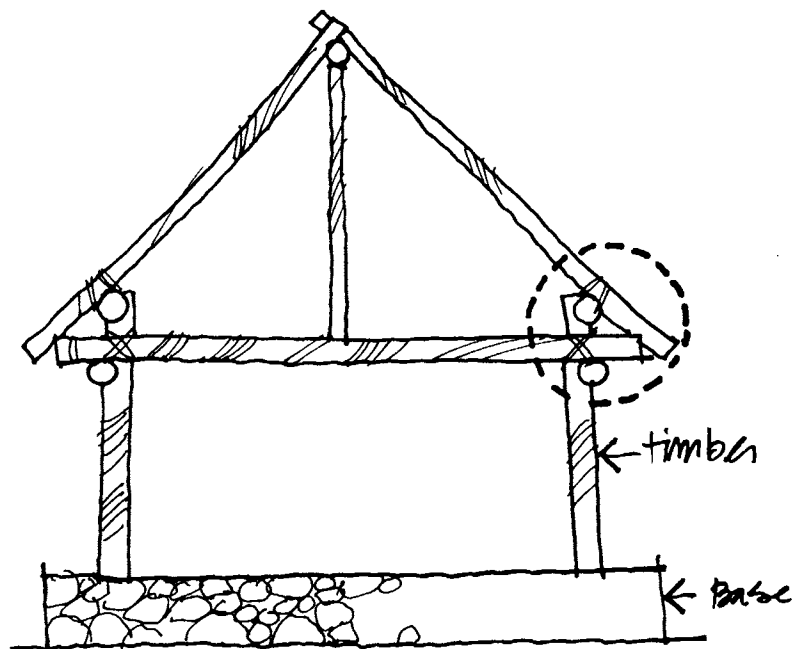
● housing



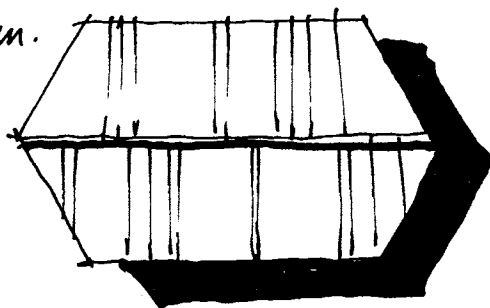
Detail of the interior of Men's house

Micronesians are the expert in doing the Nautical map and navigation tool. Any architecture forms are the expression of the long boat.

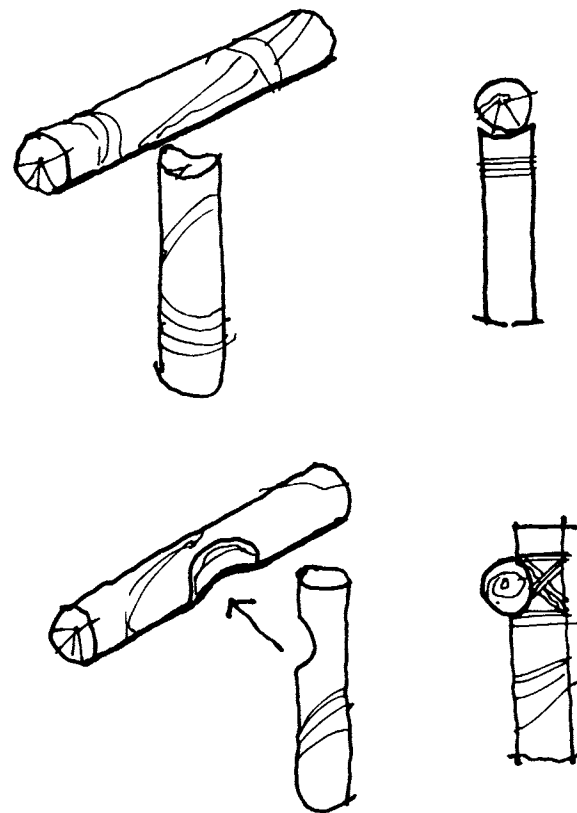
## ● structure.



## ● Roof plan.



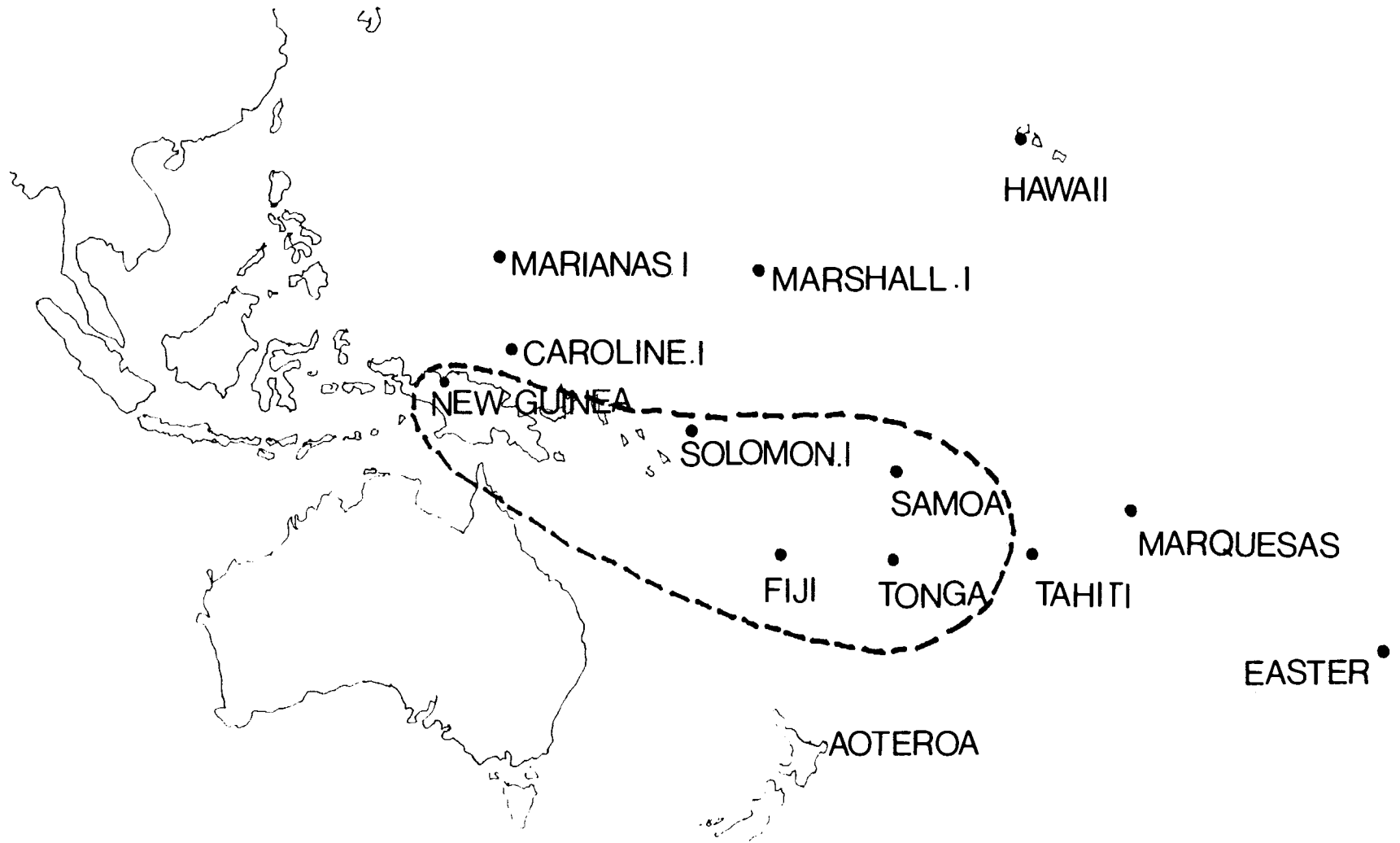
## ● joining systems.



# MELANESIA

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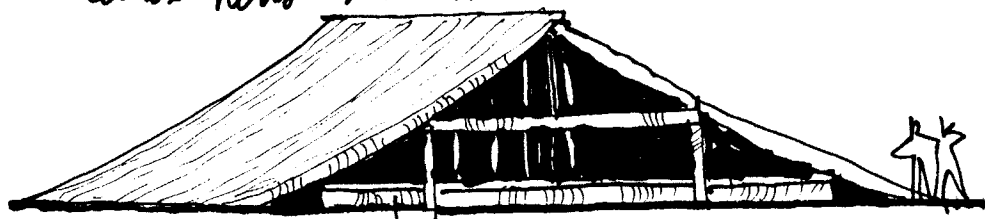
32



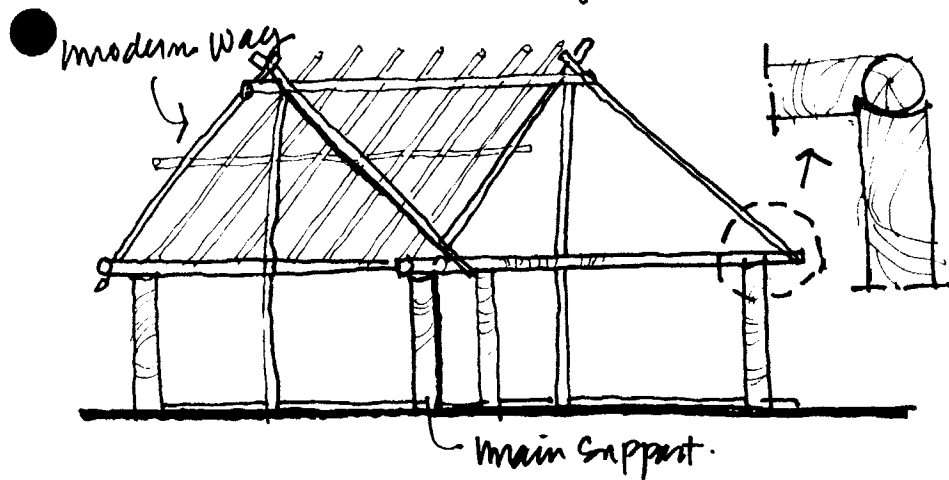
# SOLOMON ISLANDS

33

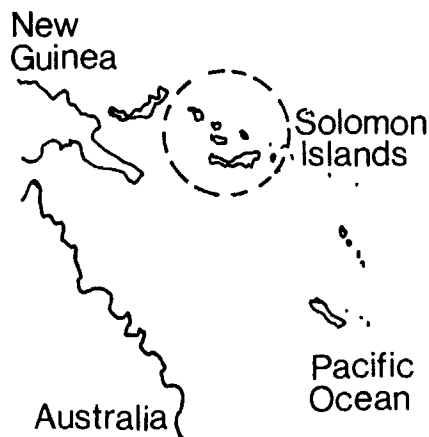
- (primitive house)  
Canoa house / tambu



bench for sitting and also  
the barrier to keep out of  
the wild pig.

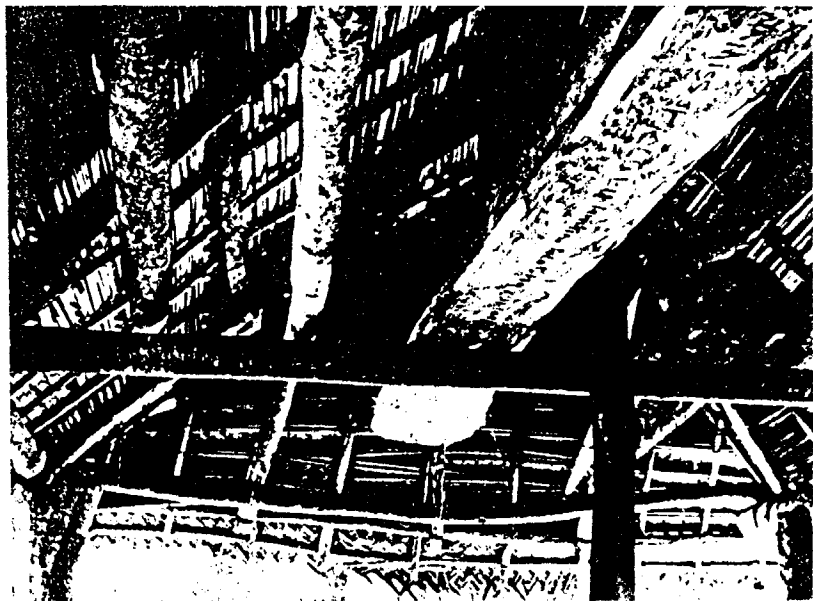


the islands ocean equatorial climate  
is extremely humid throughout the year,  
with a mean temperature of  $27^{\circ}\text{C}$  ( $80^{\circ}\text{F}$ )  
and few extremes of temperature weather.  
Rainfall is 305 cm (120 in).



the front porch of the house is used  
for social gatherings at the close  
of the day.

A festival marks the completion of a  
new tambu house, and formerly  
was accompanied by the sacrifice  
of a human being.



● interior detail.



● Nasioi - Crown of a funerary post in the form of a hut in which offerings are left.

# NEW GUINEA

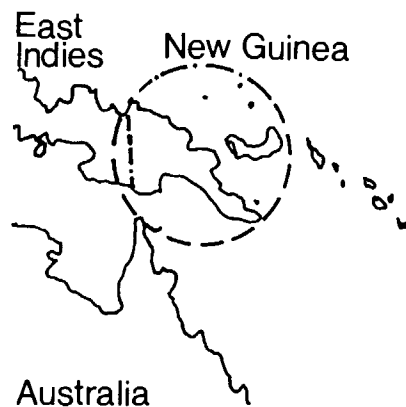
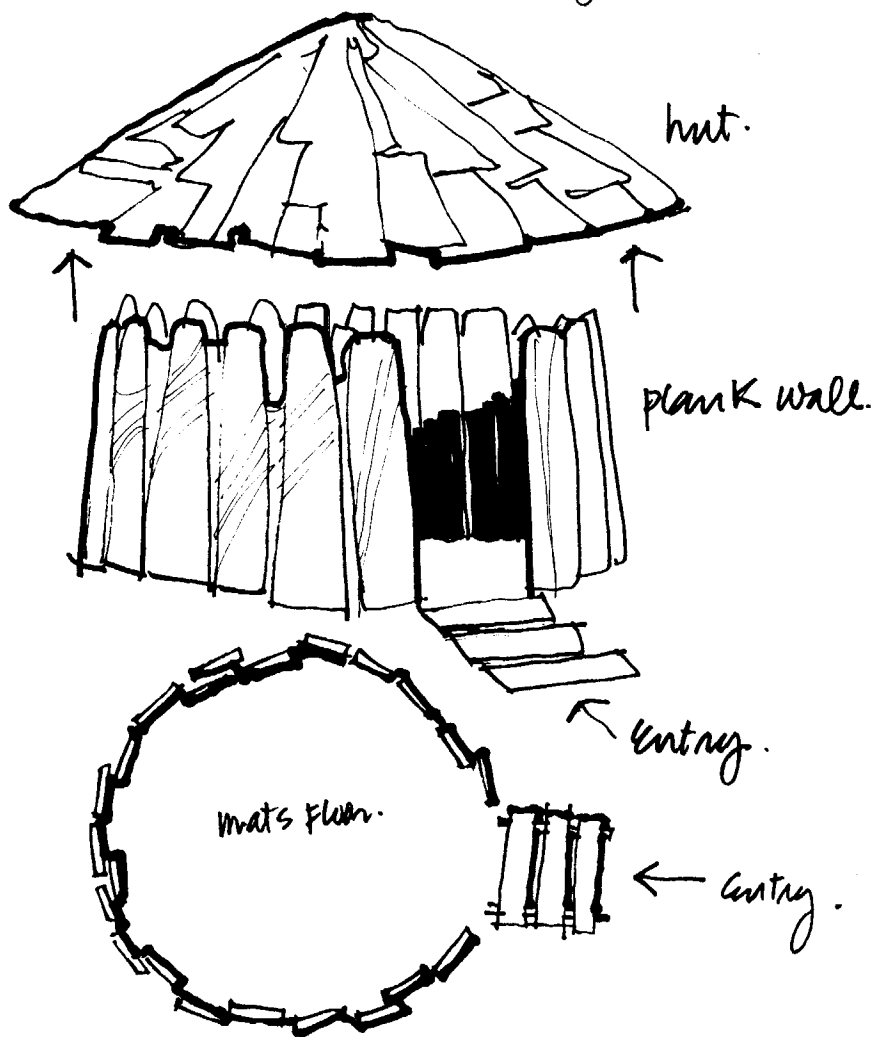
35

● Dani; round habitations (housing in mountain area)

Climate: Ranges from humid tropical to alpine.

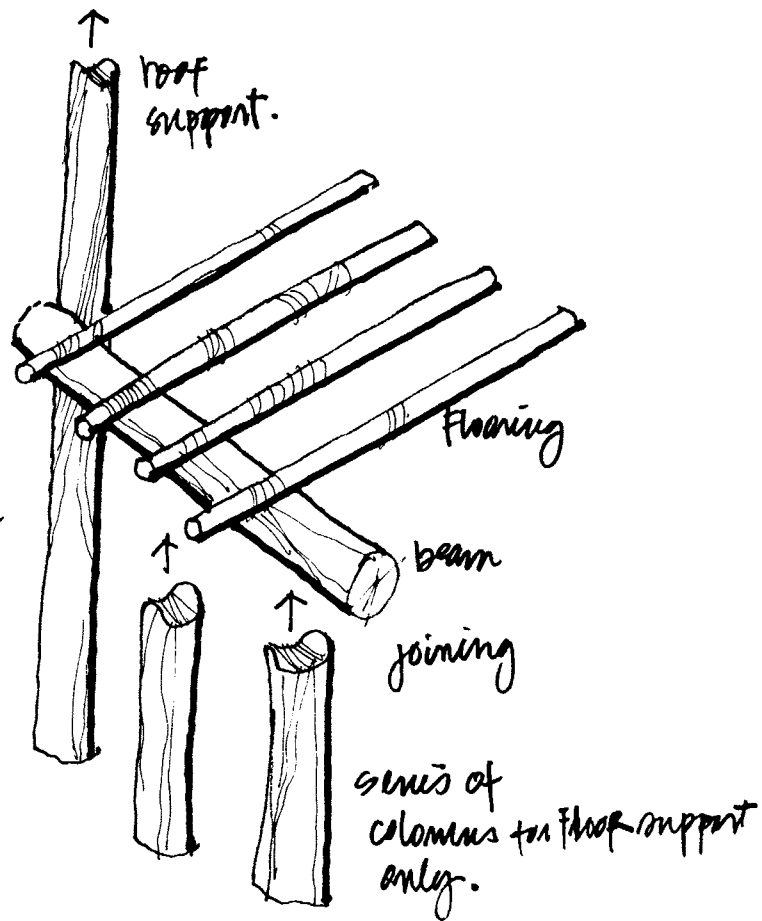
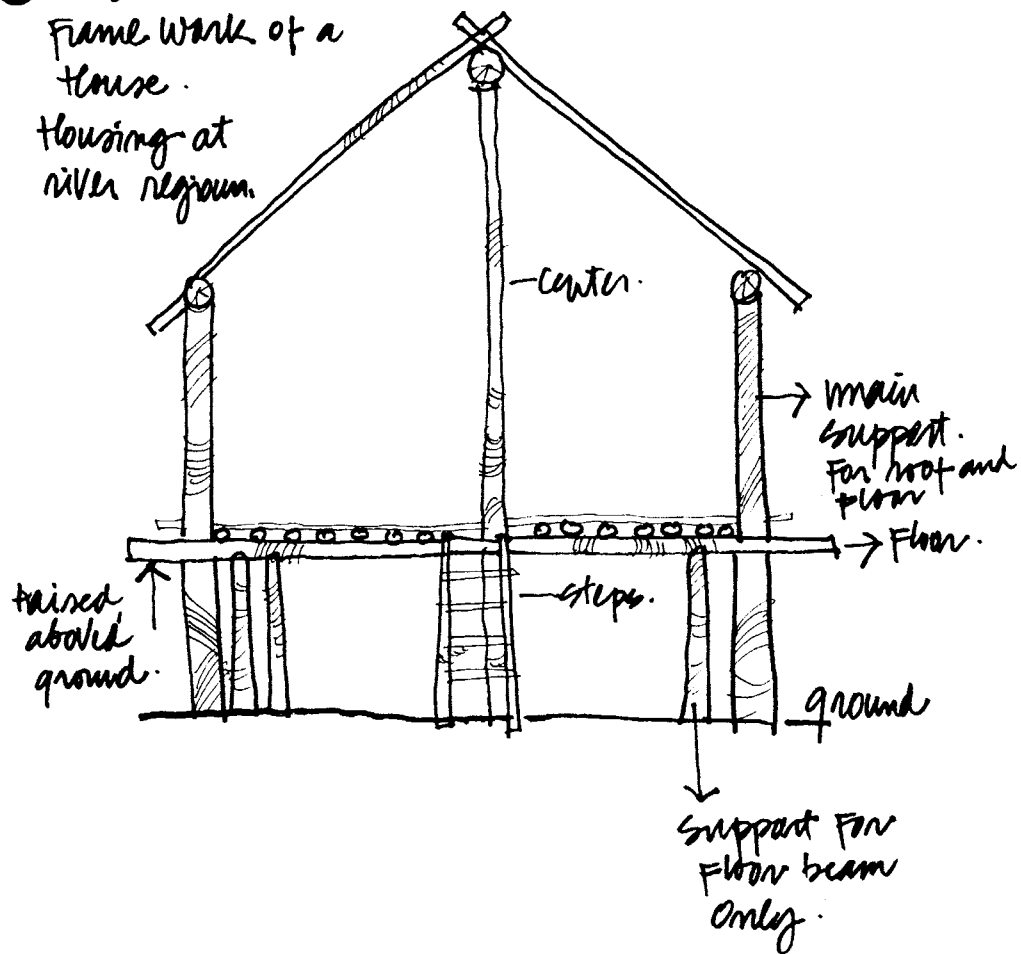
Annual rainfall 200-250 cm (80-100 in)  
Mean temperature is about 16°C (61°F)  
With day temperatures rising to 32°C (90°F) and night temperature falling to 4°-10°C (40°-50°F).

Humidity 80% with very little seasonal variation.

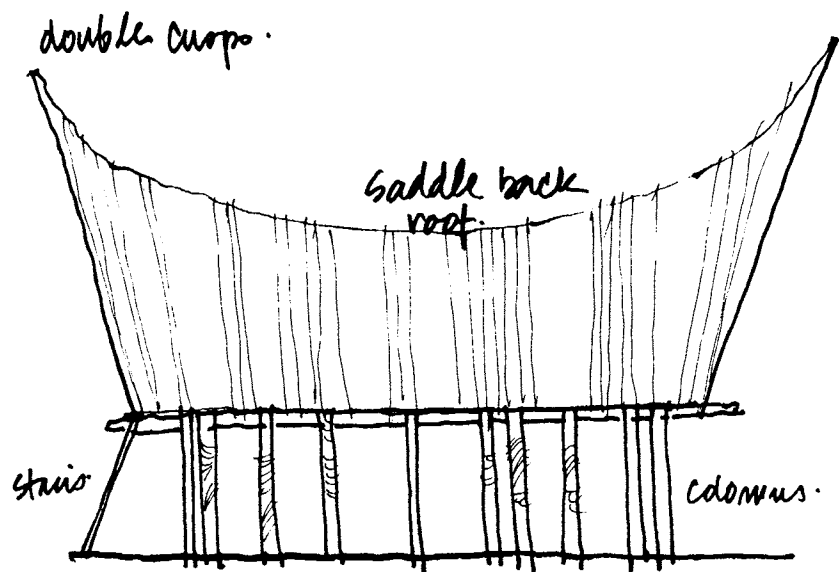




● **Tambanum:**  
 Frame work of a  
 house.  
 Housing at  
 river region.



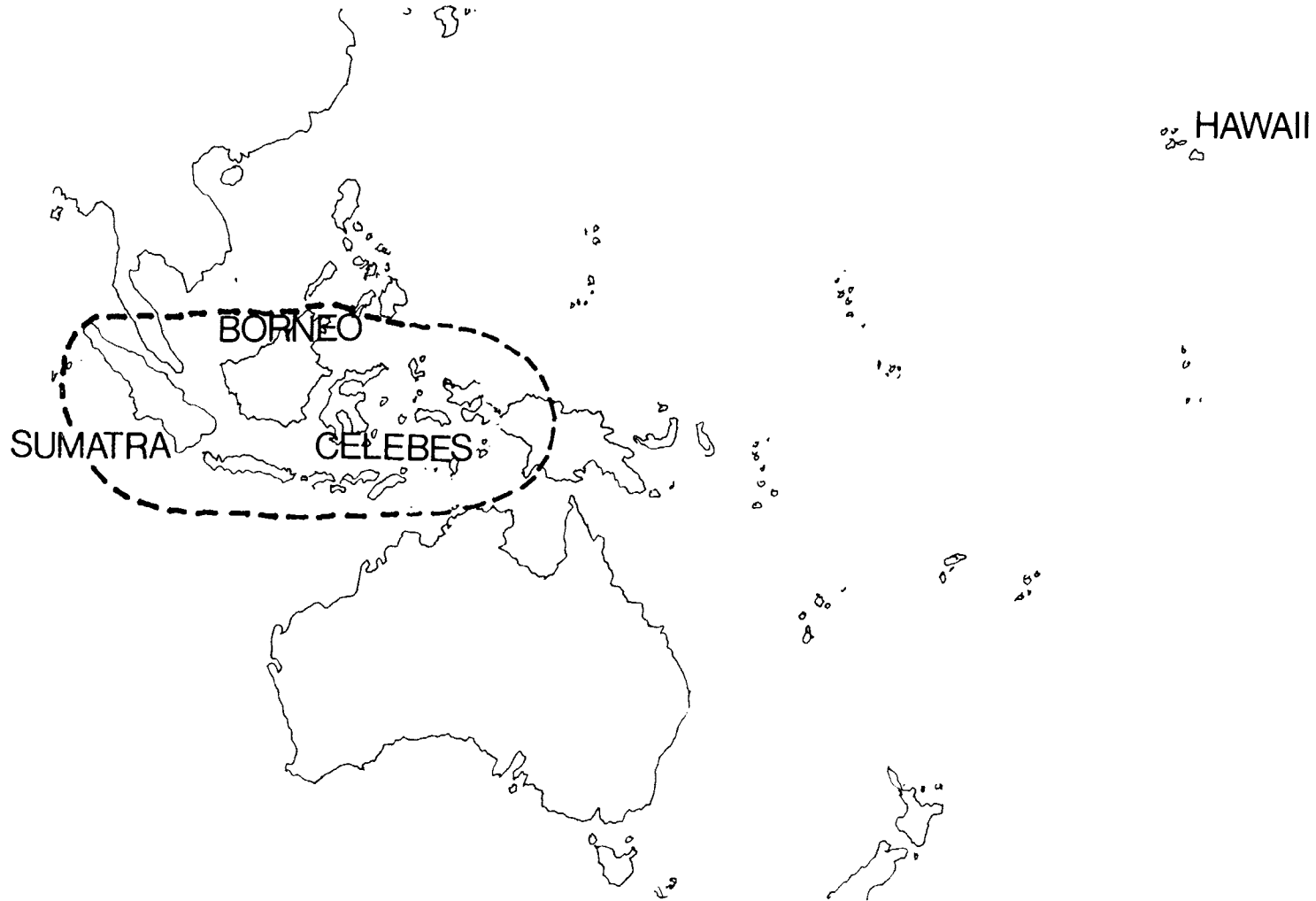
● House at river region



# INDONESIA (THE EAST INDIES)

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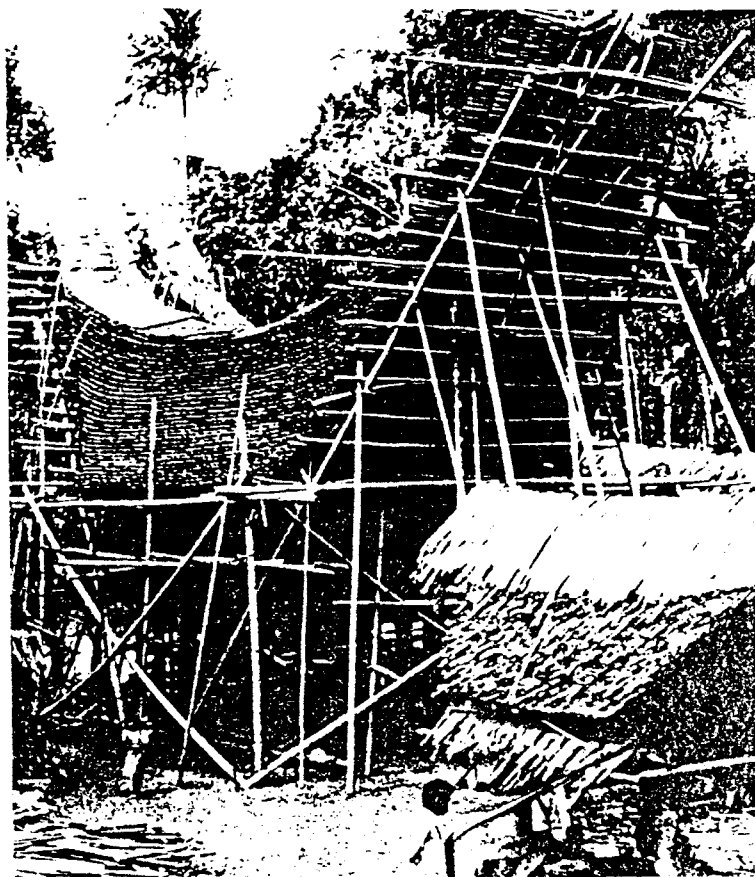
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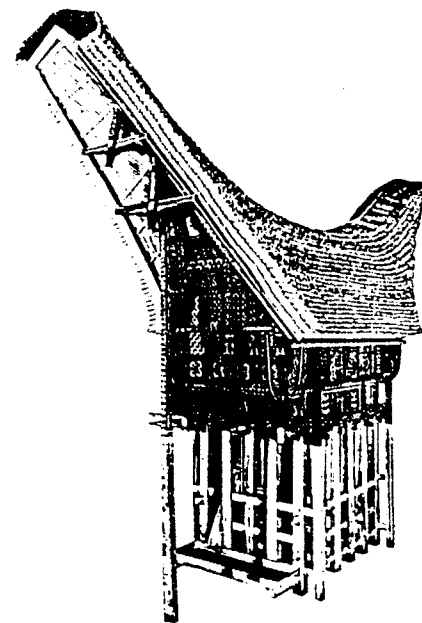
In Indonesia, there are only 2 seasons; Wet and dry (hot). The wet season lasts from about Nov. to March or April, and the hot season May-October. Sometimes it rains so hard that it is like falling into a swimming pool. During the dry season the weather is hot. The only escape is retreat to the mountain, there due to mountain breezes and altitude, there's roughly one degree of cooling for every 90 m elevation increase. Humidity is always high. Over time, the body adjusts to these very tropical conditions. The mere hint of a breeze is always the signal for Indonesian to tighten scarves, close up windows and turn up collars.

Average temperature in dry season is 82-85°F, and in wet season temperature drops 5°-10° during rain.

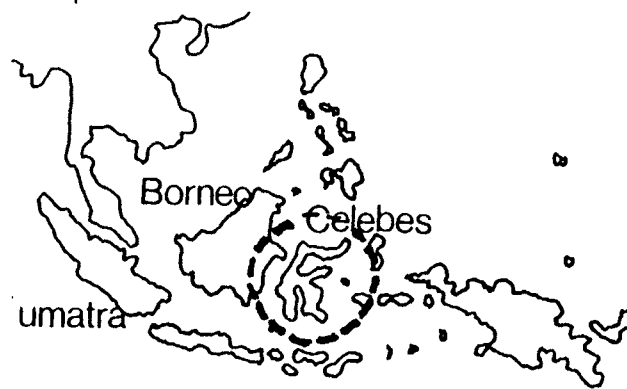


Toradja house under construction, showing the elaborate scaffolding and complex structure necessary to build the characteristic sway-back roof.

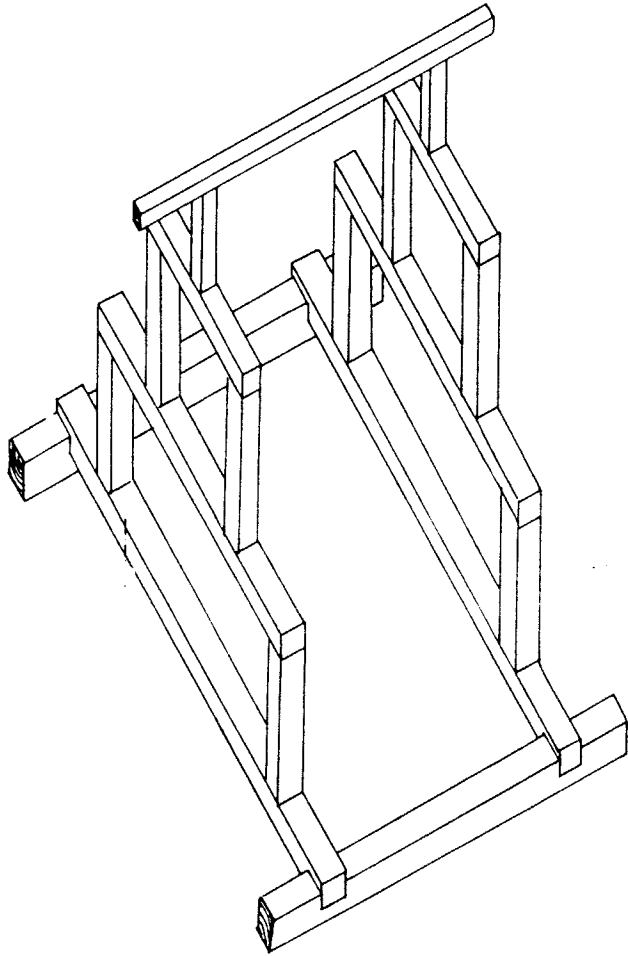
- Tamatoradja house.  
Tana - means "land".  
The land of Toradja.



- Geographical map.



● *Foot structure.*



The internal space is rectangular, filled with pillars supporting the rafters. Entry is effected either by a side stair case or by a central stairway under the house, between the piles. The windows are on the sides. The space marked out by the piles serves most often as a cattle shed. The very rich external decoration is essentially geometric but sometimes includes animal friezes composed of buffaloes or birds. It is traced in plaster work and colored black, red, ochre and white. The roof covering is formed of bamboo shingles in several superimposed layers, which gives a particular beauty to these houses.

Jacques Dumarcq. The House in South-East Asia. Oxford University Press. 1967  
pp. 50.

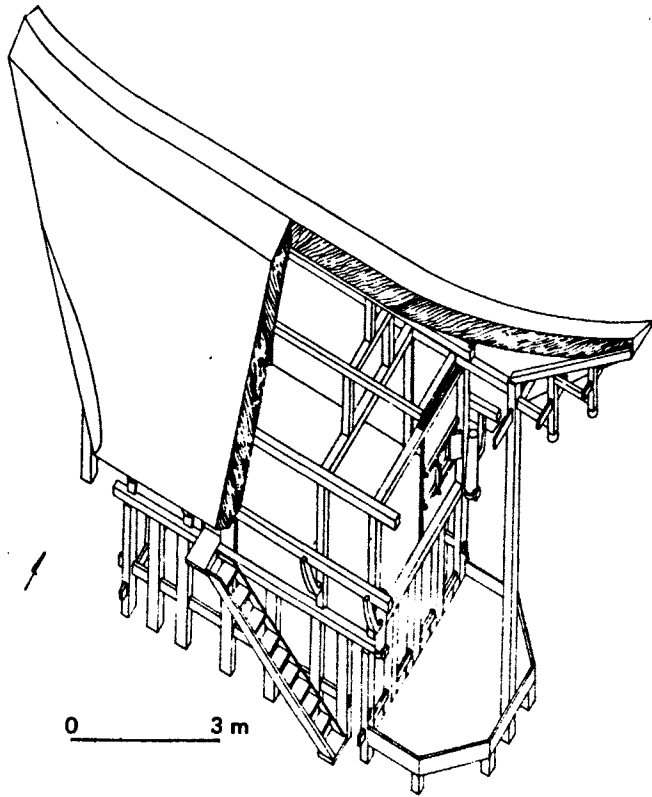


- **Climate:** The heaviest rainy season is Dec - Jan, when the whole country side is verdant. As a result, South Sulawesi harvests twice a year and seldom experiences famine.

The average temperature 75° - 85° F, with a humidity of 72 - 89%.

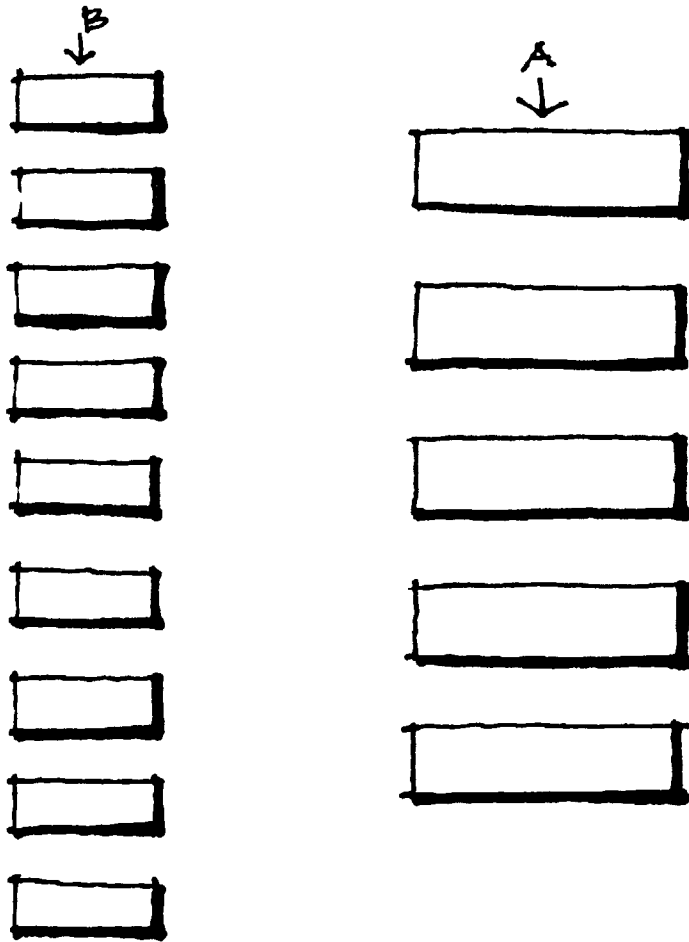
In the mountains areas the temperature is pleasant, but above 1000 m it can be unexpectedly cold.

- **Architecture:** The houses are built, raised on wooden poles, so they can be moved on runners from one place to another, and look as if they could make the journey by sea - their sweeping roofs appear like huge slope-prowed vessels riding in an ocean of tropical



foliage. In some villages where the houses and granaries stand in rows, it feels like you are in the middle of a fleet of ships floating on the wind. Usually richly ornamented and built solely by the tongue-and-groove method of construction, a traditional house has a layered bamboo roof, and on its sides a maze of geometric ornamentation in black, red and white though out of order. People are allowed to place only those designs on their houses which has the appropriate image to their caste. Horns of the buffalo - symbol of fertility, strength and protection from evil - decorate the gables of Torajan houses. All houses point north, because of the religious beliefs.





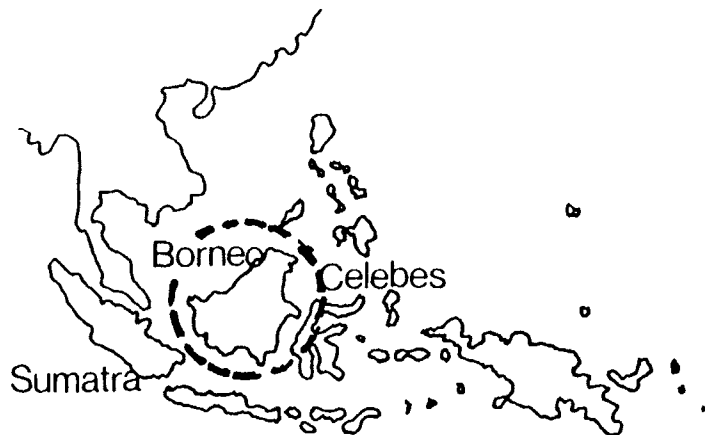
● schematic plan of a Toradja village.

A. dwellings.  
B. rice barns.

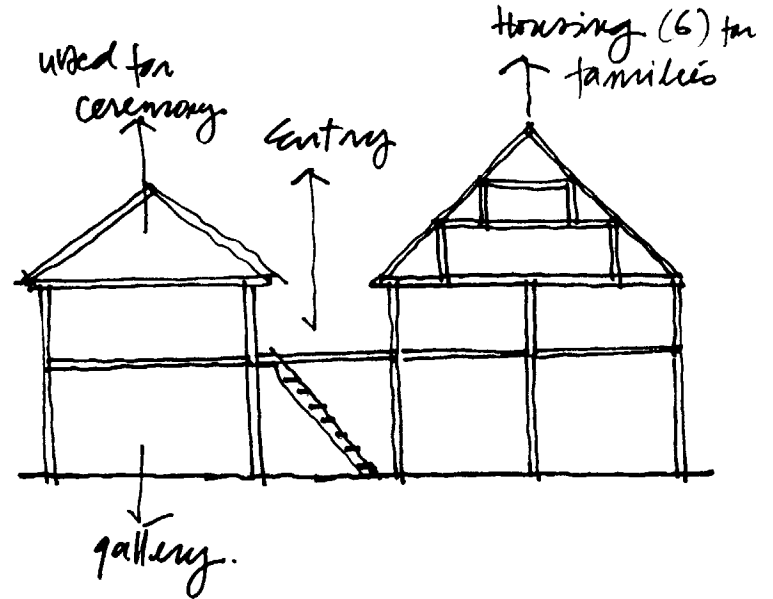
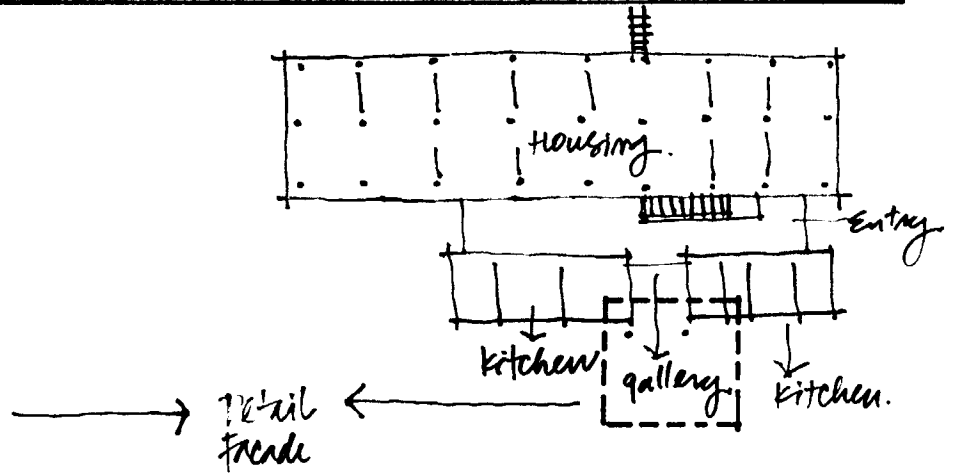
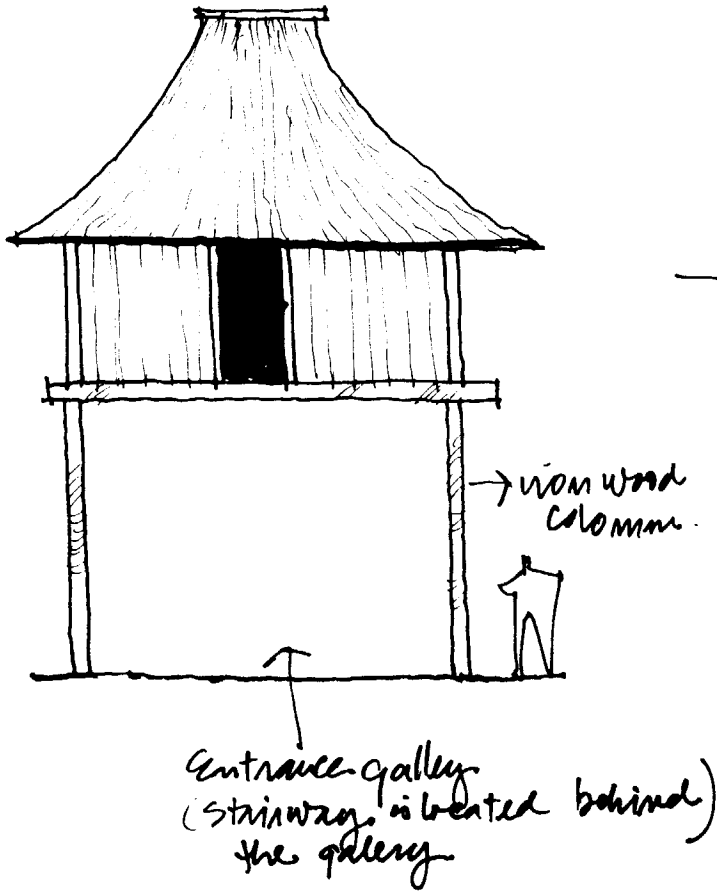
Douglas Fraser, Village planning in the primitive world. George Braziller, New York. 1968. pp. 39.



- *Climate: hot and humid. The temperature never falls below 21 degree (C), and can be much higher. Rainfall averages 381 cm/year. Rainstorm in the jungle can be torrential, a gentle rustling in the forest canopy quickly becoming a dark, gloomy curtain of rain in a primeval Cathedral.*



● long-house (Tumbang Gagu).





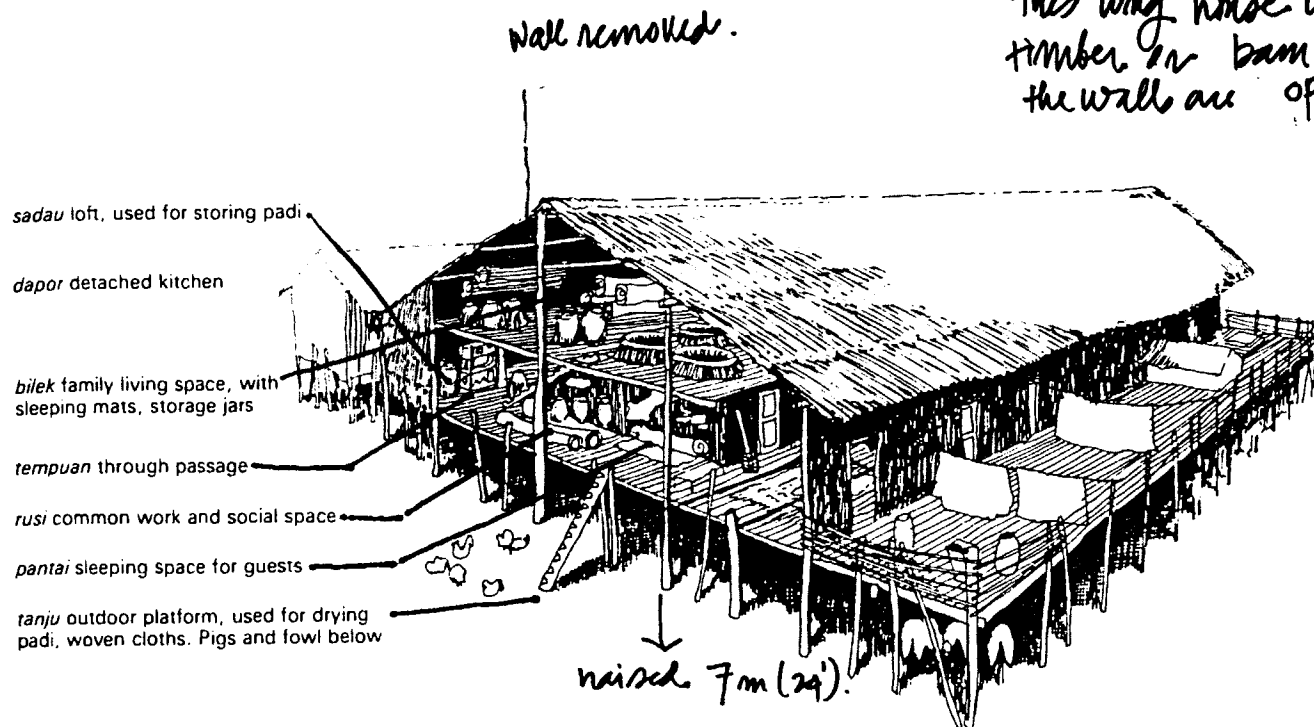
the longhouse can be expressive of the main lines of kinship and production. It is necessarily the product of collaboration on the part of an entire clan or kinship group, since only the efforts of a large number of individuals make it possible to build and maintain such an edifice: social unity is the premise, the guarantee of investment of labor that is always heavy because of the large size of building.

a longhouse can be equivalent to entire village. The interior is divided into compartments for family units with woven matting  
(Primitive Architecture. 113).

Dayak House, Sarawak in the Borneo Island.

Iban (Sea Dyak) House, Sarawak, with the end wall removed to show relationship of an internal living space or bilek, to the communal spaces.

this long house is constructed of timber or bamboo. the walls are of slats on sawn wood.

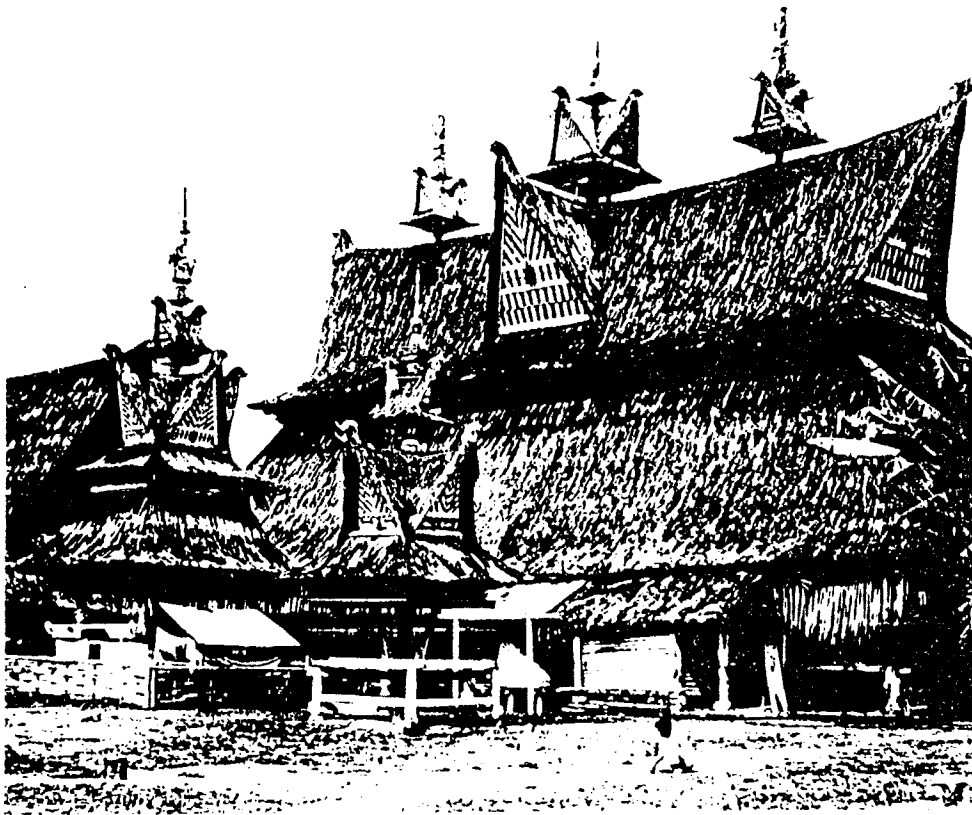


# SUMATRA

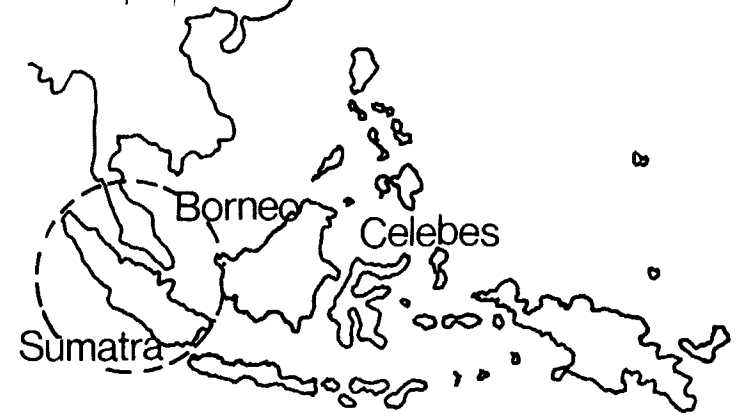
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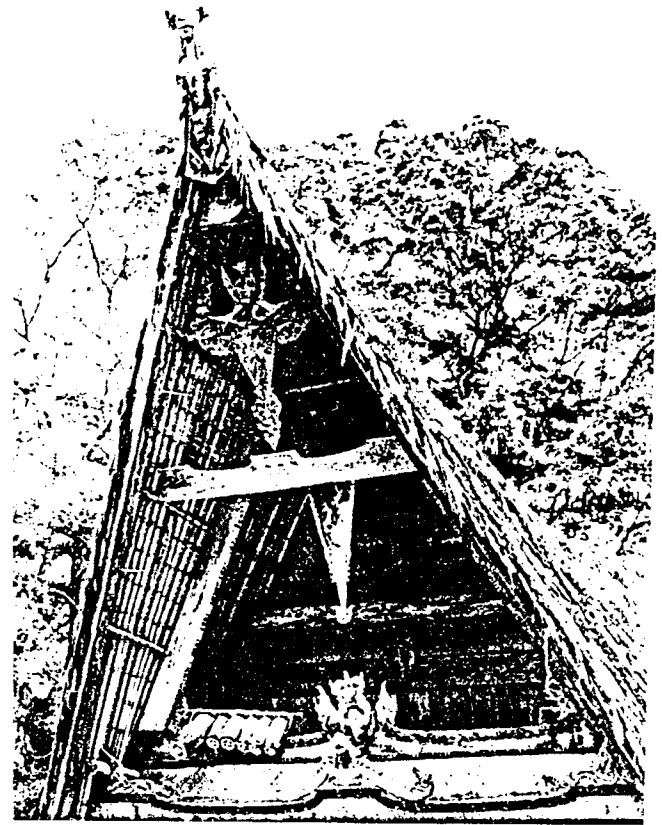
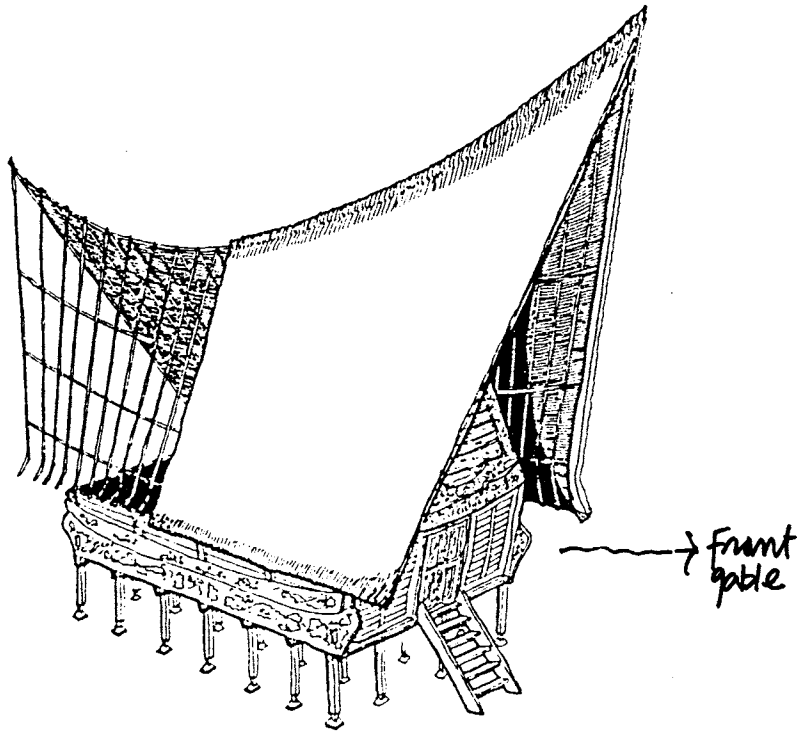
● A large Batak house.



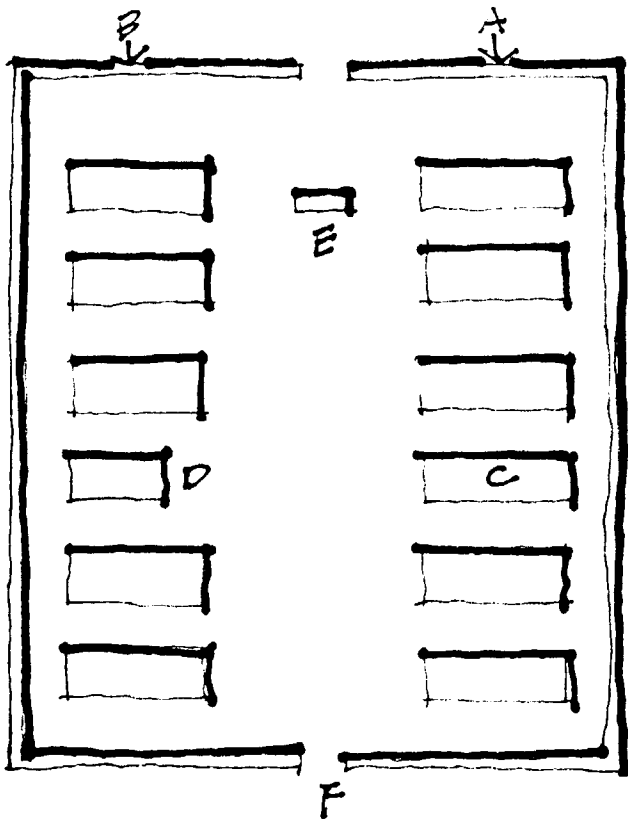
● Geographical map.



● Batak house at Toba (from the lake Toba region)



the gable end of Batak house, with carved details, bonaspati lizard, mythical creature and heraldic motifs.

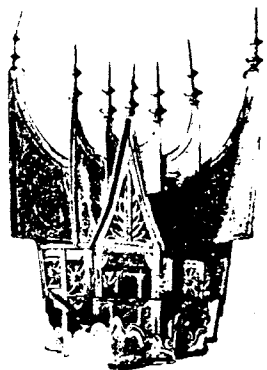


● Schematic plan of Toba Batak Village.

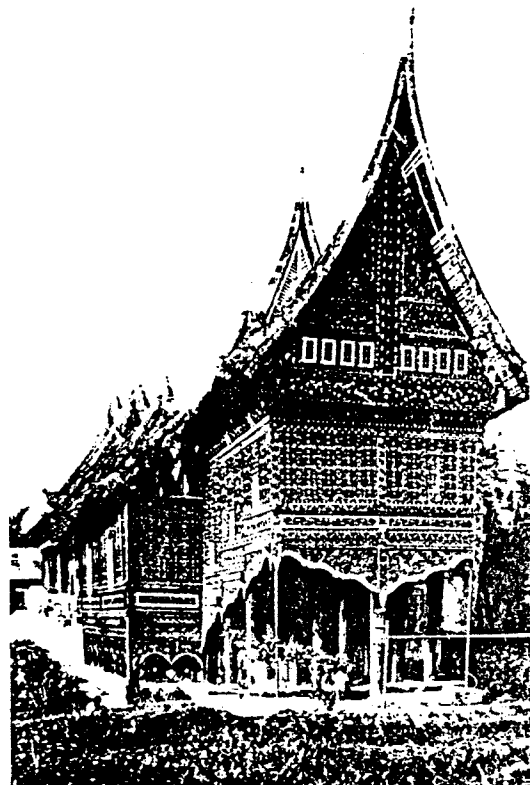
- A. Sons + families.
- B. Daughters + families.
- C. Village - chief.
- D. Sopo - rice barn.
- E. Simin - stone charnel case.
- F. fence on small dike.

Douglas Fraser, Village Planning in the Primitive World.  
 Braziller, N.Y. pp 45.

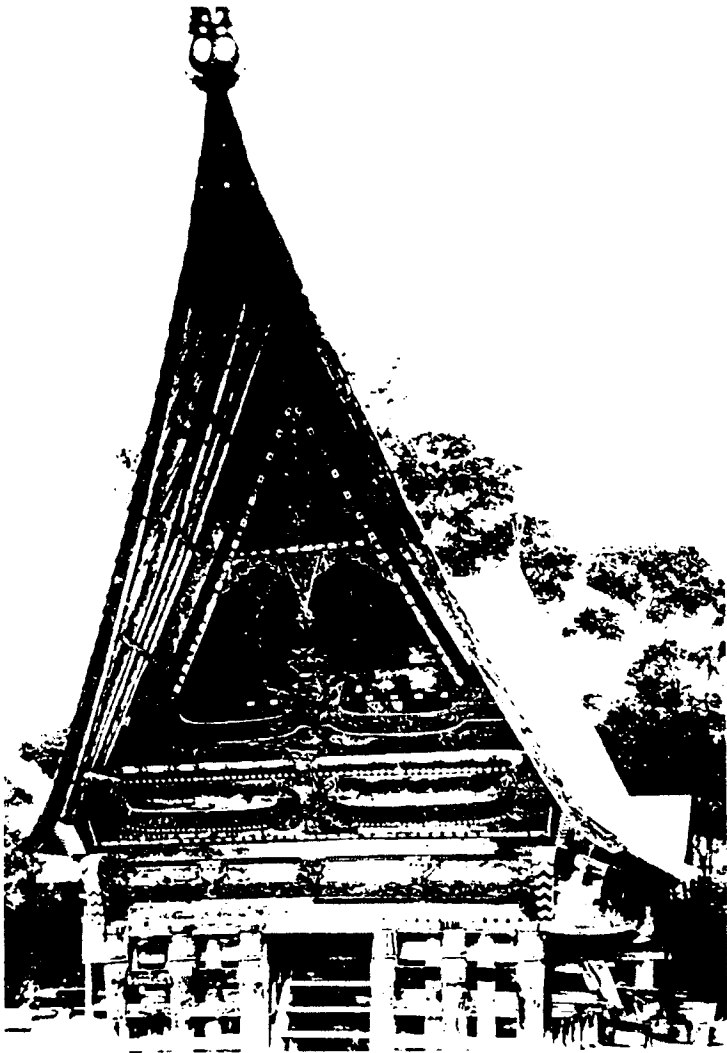




Mimangkabau house,  
more delicate in design  
and carved motifs.



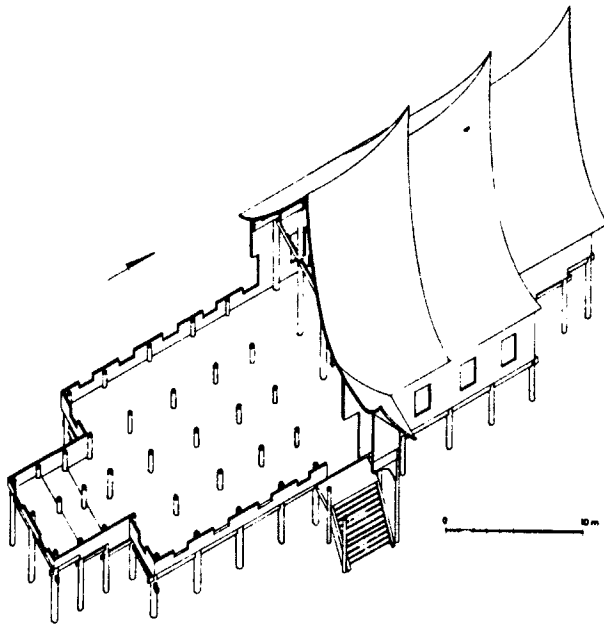
Mimangkabau House.



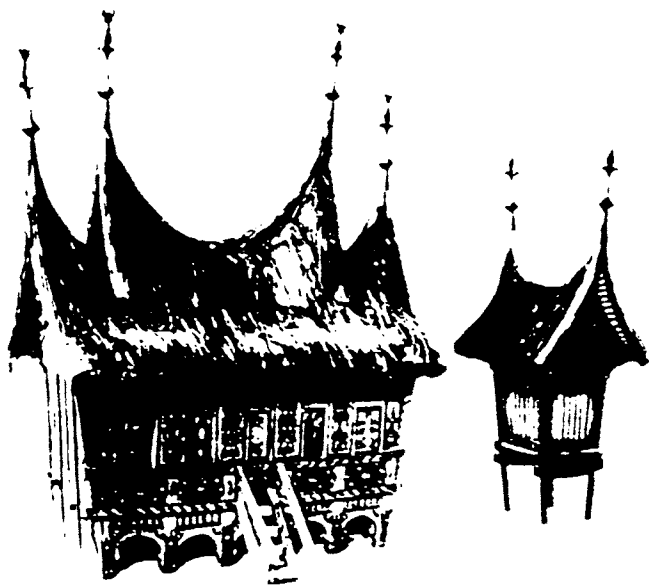
- "Mimangkabau architecture is some of the most significant in all of Indonesia. As seen on new government offices and public buildings on Java, this unique architecture has even had a great influence on modern Indonesian architecture. The peaked, overhanging roofs of many Mimang buildings are reminiscent of the carved horns of the revered water buffalo and of the woman's ceremonial headdress. Traditional houses are disappearing now, replaced with brick and iron-roofed structures; aside from hotels and government buildings, few of the expensive thatch-roof are being built nowadays".

(Indonesian handbook)  
P 517

- Climate: Heaviest rain N of the equator occurs Oct - Apr. Dry season May - September.

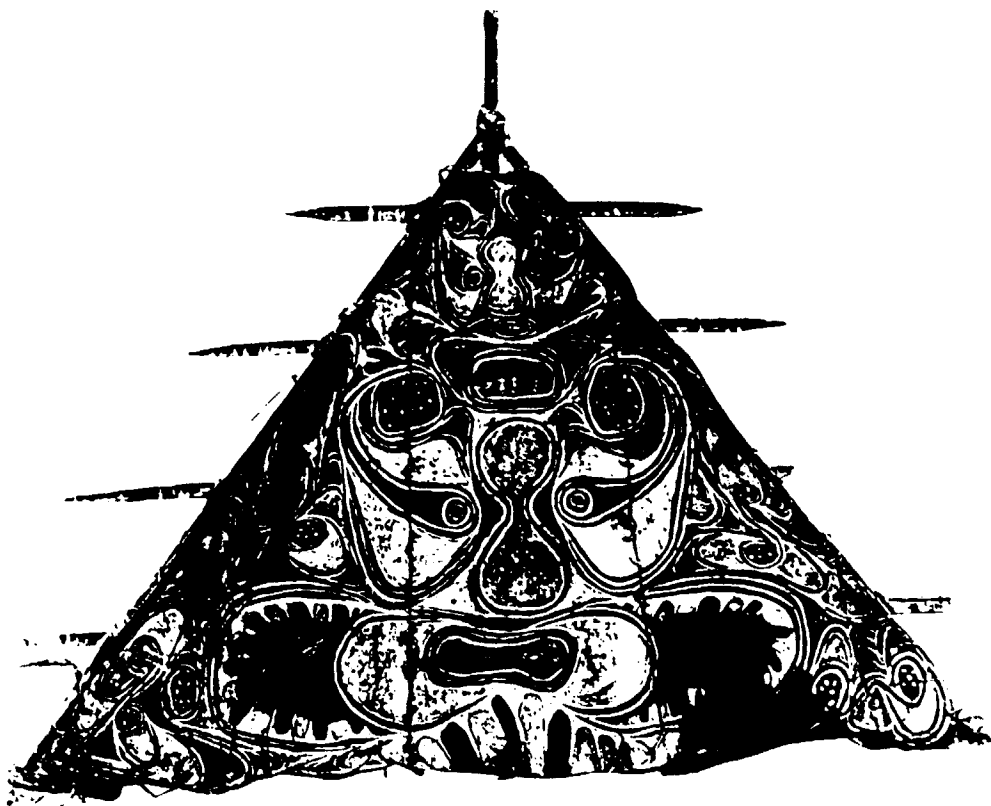


The houses of the Minangkabau region are very large; compared to other traditional houses. The floor area often 450 square metres. The plan is rectangular with a projection at each end usually comprising three tiers with different floor levels. The entrance porch is perpendicular to one of the longitudinal sides, usually situated in the centre but not invariably so. The entrance can be completely off-centre. The whole construction is asymmetrical, with a single projection. The roof usually consists of five elements, inserted into each other, but, as the plan has only three areas to be covered, the roof and the plan do not always come together in an elegant fashion. The roof rests directly on the pillars which prolong the piers internally.



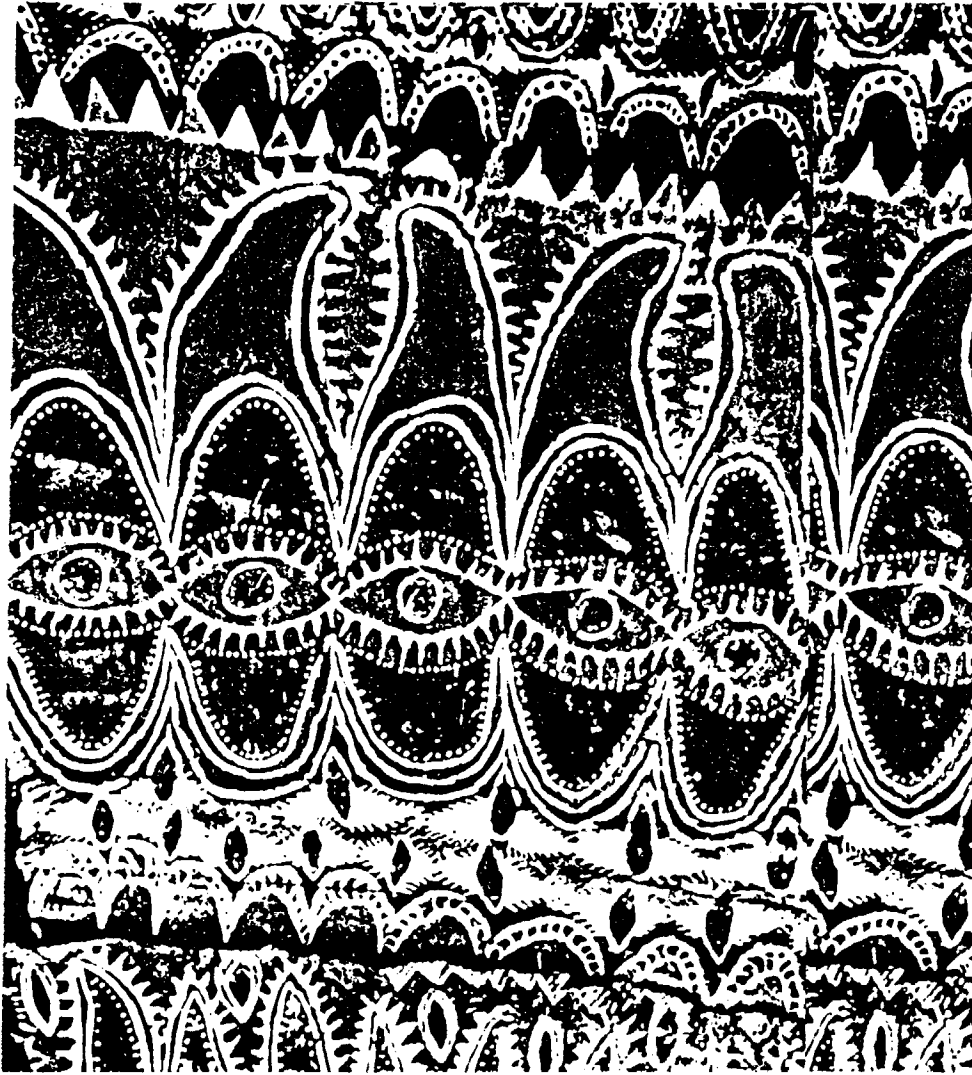
This technique, which takes up a lot of the living space, allows for great flexibility in internal arrangement. The surface of the building is divided by the pillars into squares of approximately 3 meters on each side, and the partitions are fixed to the pillars to mark out the areas inside. When this arrangement is found unsuitable it can be easily modified. If a ceremony requiring a lot of space is to be held the partitions can be removed without affecting the structure in any way. Externally these houses are decorated with rectangular panels decorated with floral motifs which hide the abutments of the beams supporting the floor.

Jacques Darmasety. The House in South-East Asia. Oxford Univ. Press. 1987. pp. 39.



"In Borneo, Sumatra and Celebes, they developed specific architectonic styles out of an age old stratification that had resulted from successive waves of migration, coming for the most part from the continental coasts, and from local cultures that had already developed bold and complex architectonic solutions: In this region, the art of building the large structures of the village chefferie has survived nearly unaltered to the present day. They include not only dwellings but also trees, plaza, fortified enclosures, altars and tombs. Ironically, this tradition, because of its extensive use of stone, is commonly defined as megalithic." (primitive architecture pp.196.)

# CONCLUSION

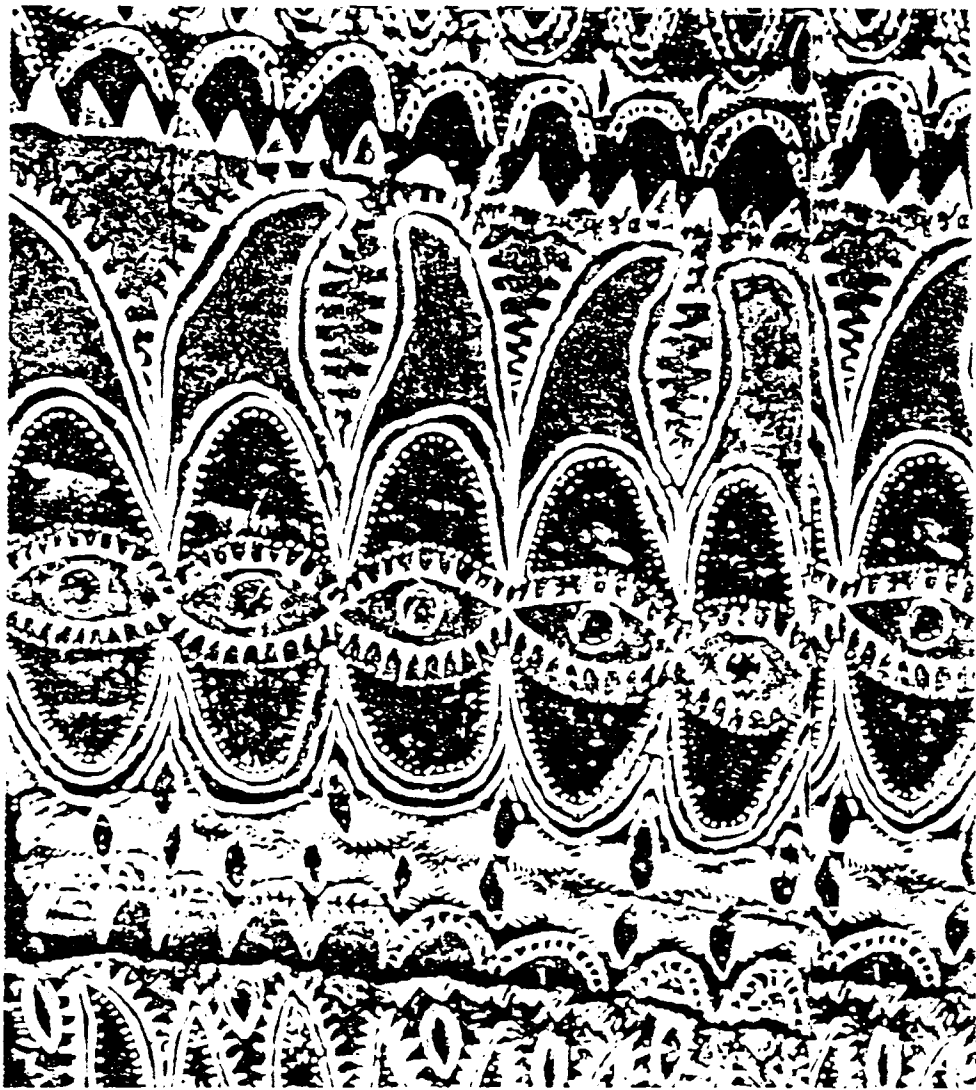


This book illustrates many examples of dwellings from across the Pacific. The dwellings of mankind represent the complex interaction of many aspects of culture which are essentially specific to these societies.

The importance of these settlements are their relationship to territory and site, social structure, economy, markets and communications, as well as the fact that they form a living record of the structural achievements of their builders.

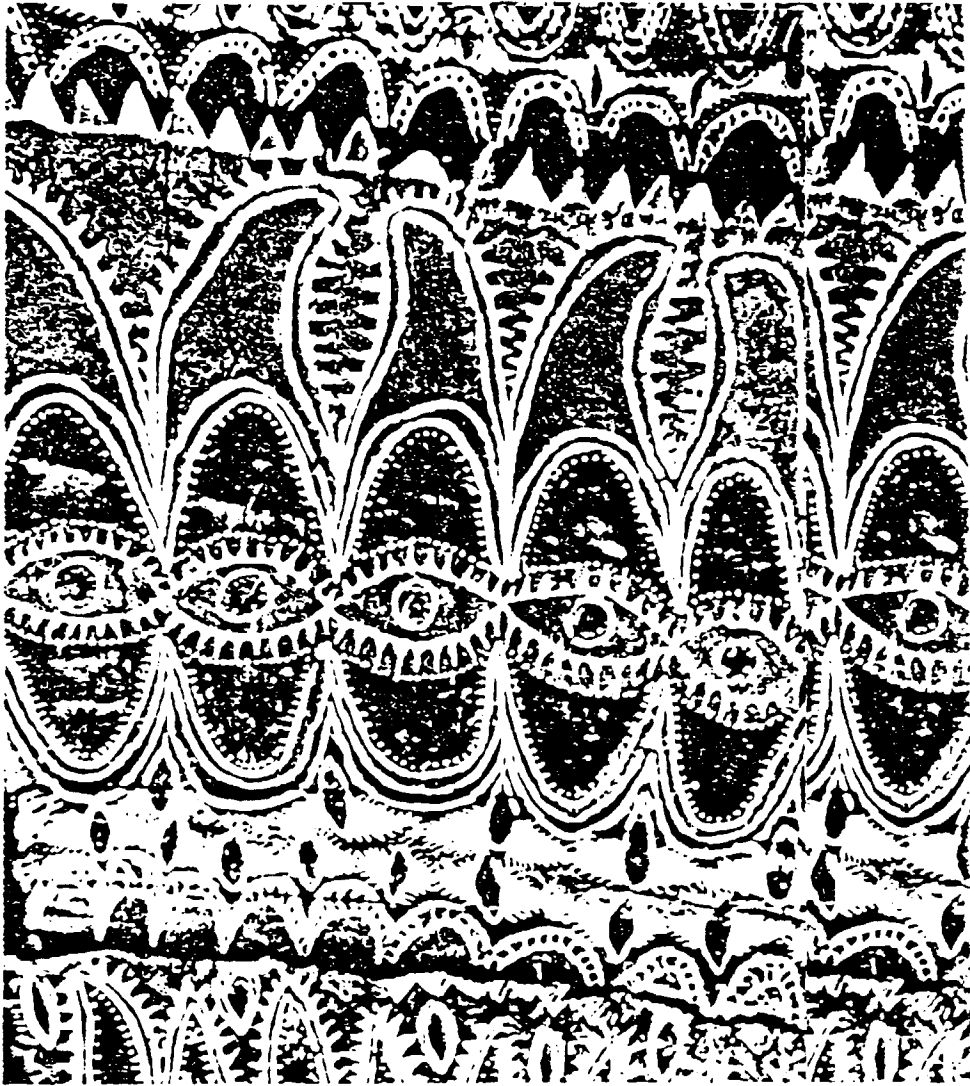
Dwelling types are formed by several significant factors which include the availability of particular materials, and the skill of local craftsmen.

The indigenous houses of the Pacific illustrated in this point. Building materials were almost



gathered from the immediate surroundings of the construction site. The skill to fully develop the design potential of a particular type of materials, combined with specific cultures of the region to give shape to the traditional housing of the specific.

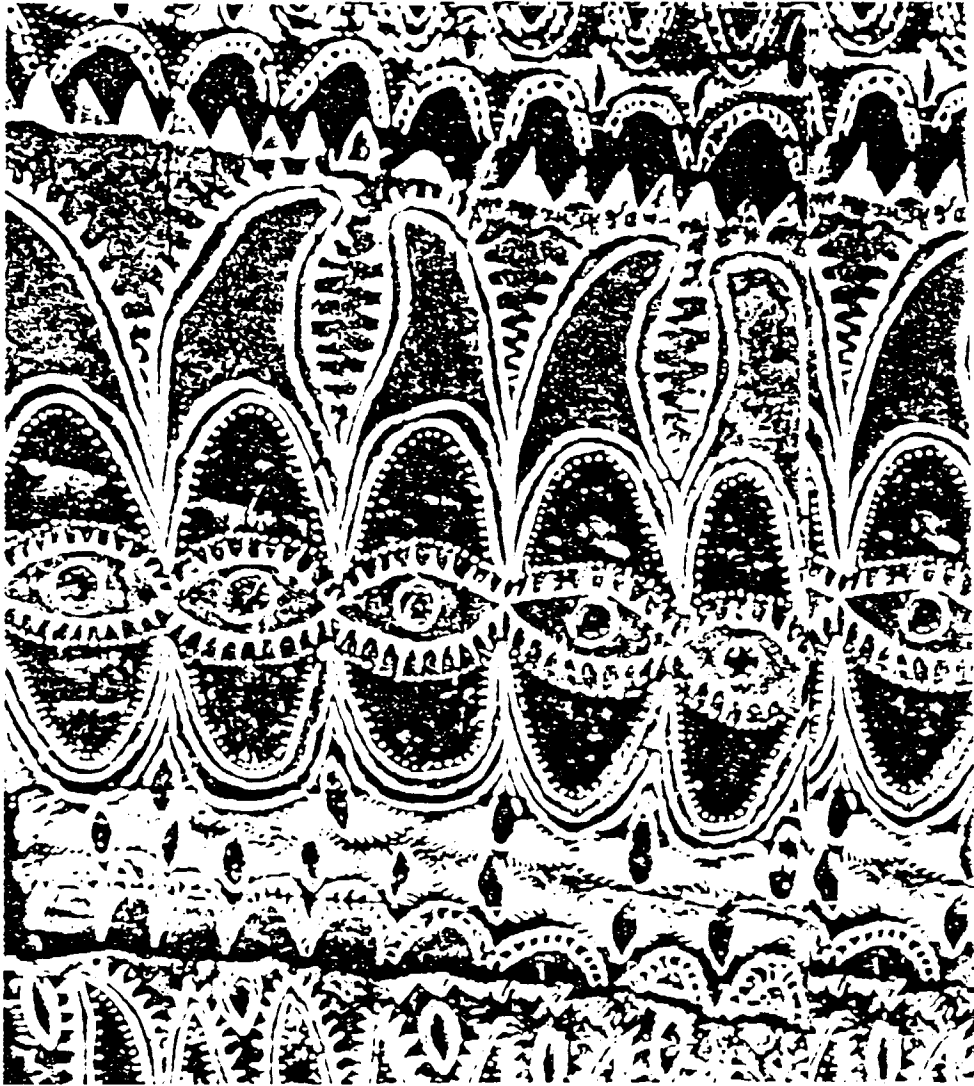
Climate is another significant factor in determining the dwelling forms documented in this paper. The general climate particular to each island group influenced the social structure and family type as well as spatial relationships, cycles of the day, the seasons, the routine working habits in a year and of life itself. These, in turn, profoundly affect internal and external use and forms of the traditional houses of the Pacific.



In the twentieth century, in and around the Pacific, destruction of traditional domestic dwellings has become almost total as the local population choose to adopt the contemporary life-style. It is to be regretted that there are not more efforts made to rehabilitate and preserve at least a wide collection of all types of traditional housing.

Hopefully, the young Pacific Rim architects of today will see in these historical structures both their own heritage and time proven design strategies, both aesthetic and practical. It is hoped that they will apply these lessons to the techniques and needs of modern life. In this way, each region of the Pacific will





retain its distinctive character  
of architecture in its contempo-  
rary structures.

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APRIL

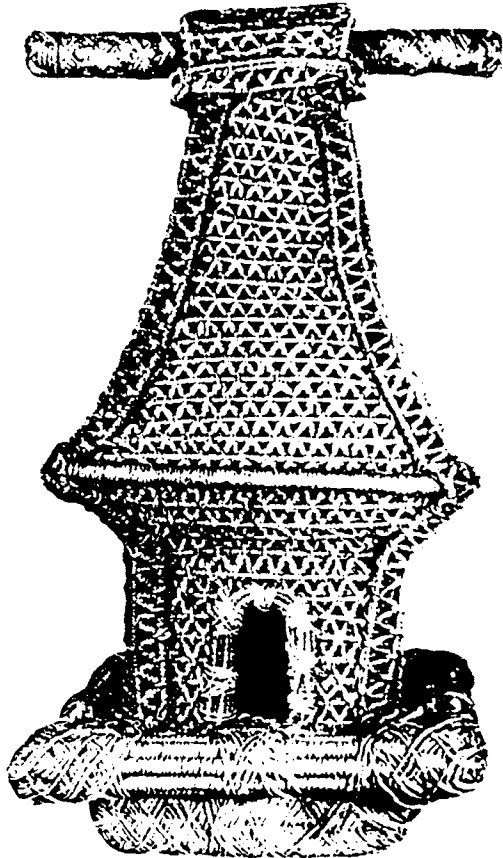
1989



# ANNOTATED BIBLIOGRAPHY

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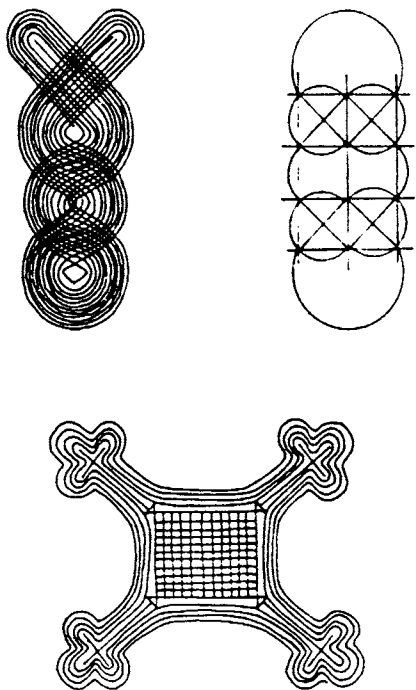


*The House in South-East Asia* covers traditional domestic architectural forms from the earliest reconstructions of Dong Son culture through the different regional variants on the mainland and in the archipelago. Special attention is given to the way building materials, mostly wood, affected structures, and there is a chapter devoted to the techniques of roof construction.

Expatriate influences in house forms, notably Chinese, European and Anglo-Indian, are covered and current trends surveyed. The volume is lavishly illustrated with color plates and line drawings by the Author.

Monsieur Dumarcey is a noted French architect currently working in Indonesia for the École Française d'Extrême Orient. He has previously published with Oxford "Bonobuden" and "The Temples of Java".

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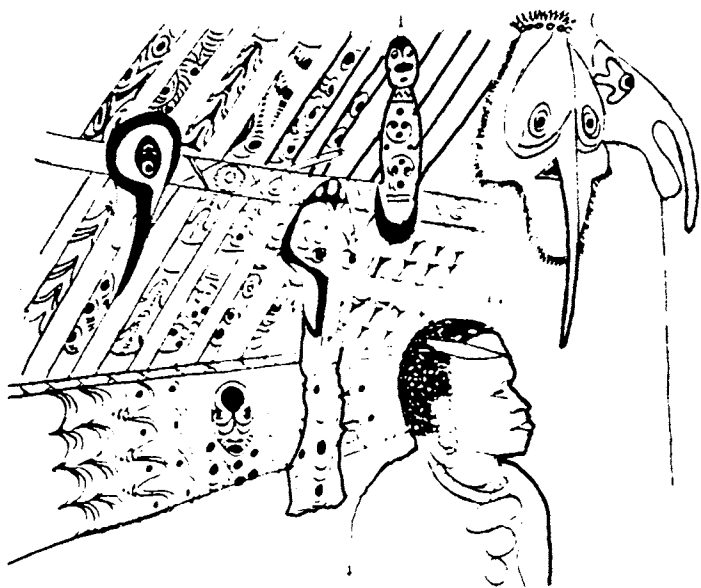
Te Rangī Hīroa. Acts and Crafts of Hawaii. Bernice P. Bishop Museum special publication 45. 1964.

Te Rangī Hīroa, the director of Bishop Museum from 1936 until his death on December 1, 1951, was a remarkable man. Son of a Maori chiefess and an Irish father, he was born in Urenui, New Zealand, August 15, 1880. In a career marked by achievement, he served variously as physician, public servant, elected representative, teacher, administrator, and research scholar. His contribution to Pacific ethnology are those for which he is most noted, but this experience and accomplishments in other fields afforded an unparalleled richness of background which made his anthropological eminence possible.

The literature on Village Planning the Primitive World, by Douglas Fraser is extremely particularistic and is scattered through countless books and articles. The following is only intended, therefore, to give a basic orientation in the field. For more information on planning in specific societies, the reader must consult the anthropological, geographical, and art-historical bibliographies available for each area.

Behnen, Walter. Die Wohnstätten der Eingeborenen im Innern von New-Guinea. Stuttgart. 1918.

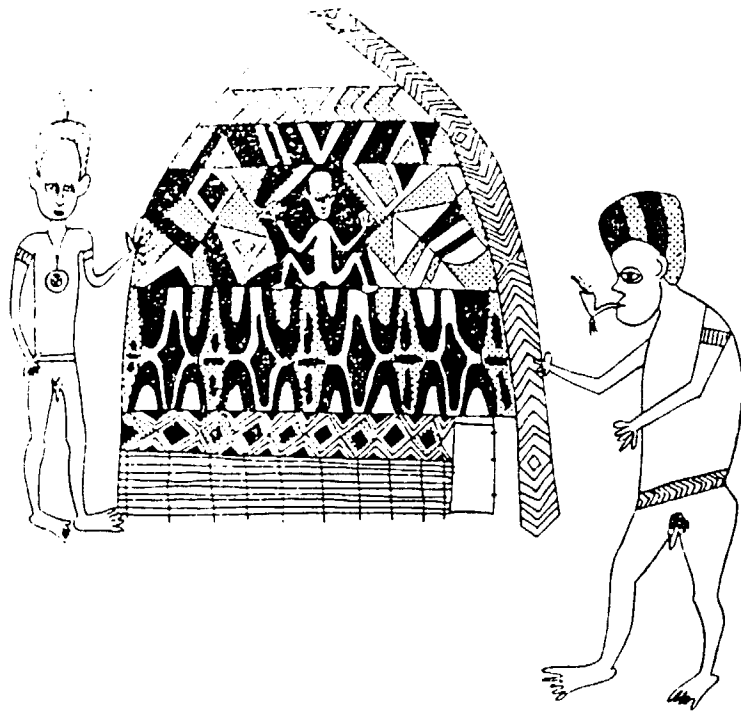
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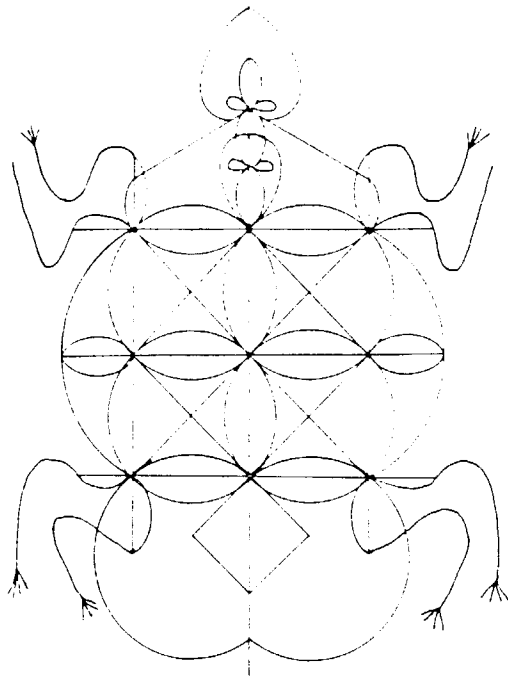
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66



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Dec: '21 p 543 - 558.  
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- Tahiti Islands: National geographic magazine ;  
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