

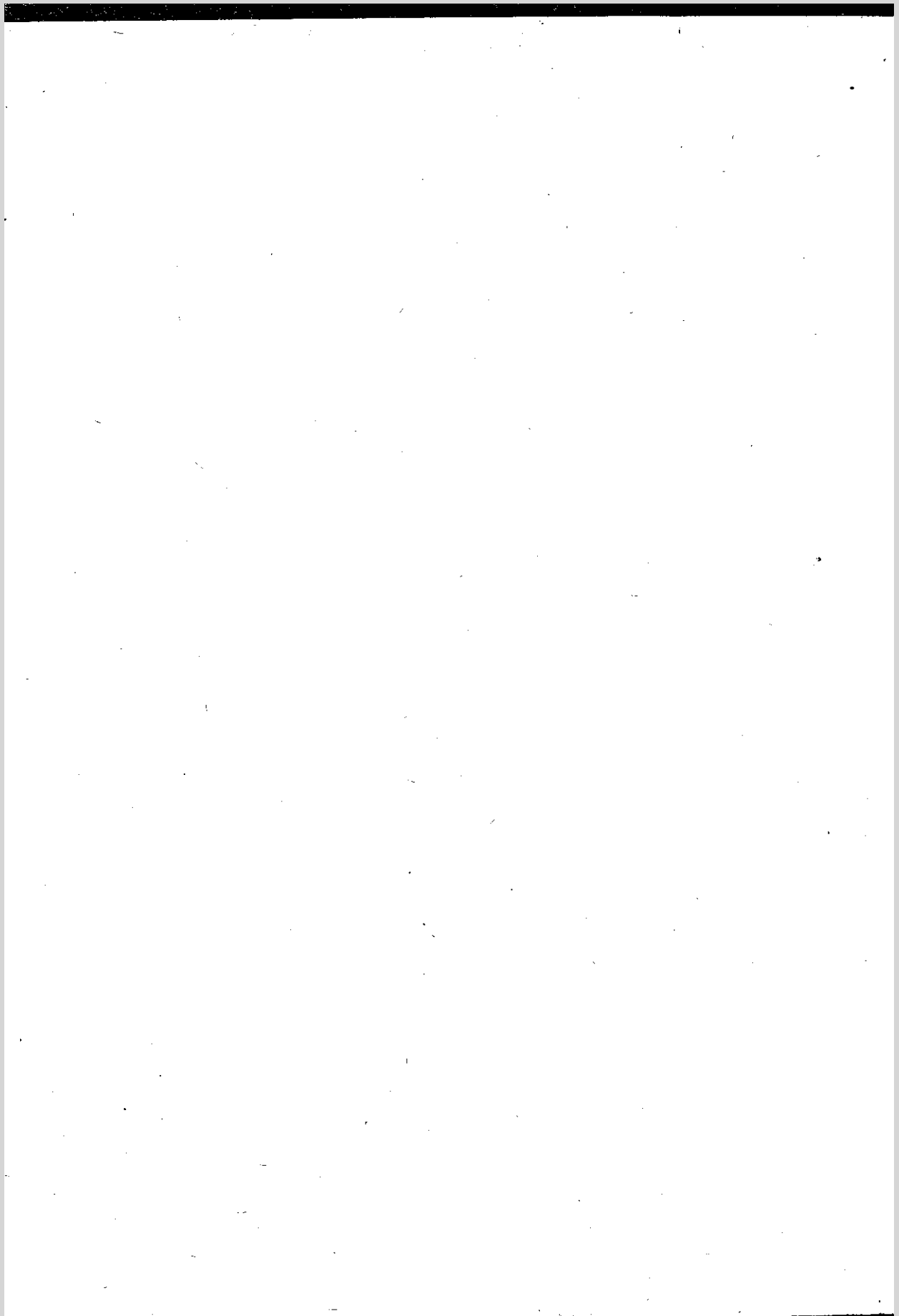
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Or

Wolfgang Voigt

Verzeichnis der Orientalischen  
Handschriften in Deutschland

Suppl. 2 : ROCK



**VERZEICHNIS DER ORIENTALISCHEN HANDSCHRIFTEN  
IN DEUTSCHLAND**

**IM EINVERNEHMEN MIT DER DEUTSCHEN MORGENLÄNDISCHEN GESELLSCHAFT  
HERAUSGEGEBEN VON**

**WOLFGANG VOIGT**

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**SUPPLEMENTBAND 2**

**J. F. ROCK**

**THE LIFE AND CULTURE OF THE NA-KHI TRIBE  
OF THE CHINA-TIBET BORDERLAND**

**M. HARDERS-STEINHÄUSER UND G. JAYME**

**UNTERSUCHUNG DES PAPIERS ACHT VERSCHIEDENER  
ALTER NA-KHI-HANDSCHRIFTEN  
AUF ROHSTOFF UND HERSTELLUNGSWEISE**



**FRANZ STEINER VERLAG GMBH · WIESBADEN**



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FRANZ STEINER VERLAG GMBH · WIESBADEN

1963

Mit 1 Farbtafel, 1 Karte und 31 Abbildungen auf 22 Tafeln

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M. HARDERS-STEINHÄUSER UND G. JAYME

Untersuchung des Papiers acht verschiedener alter <sup>1</sup>Na-<sup>2</sup>khi-  
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## VORWORT

Professor Dr. J. F. Rock/Honolulu hat grundlegende Arbeiten über Schrift, Sprache, Literatur, Kultur, Religion und Naturwissenschaften der <sup>1</sup>Na-<sup>2</sup>khi in Südwestchina veröffentlicht. Im vorliegenden Aufsatz faßt J. F. Rock die bisherigen Ergebnisse der Nakhilogie zusammen und weist auf weitere Probleme dieser für die zentralasiatische Forschung sehr wichtigen Wissenschaft hin.

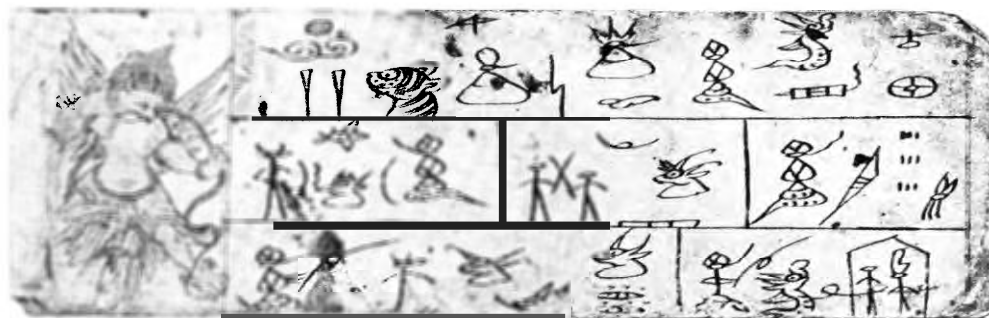
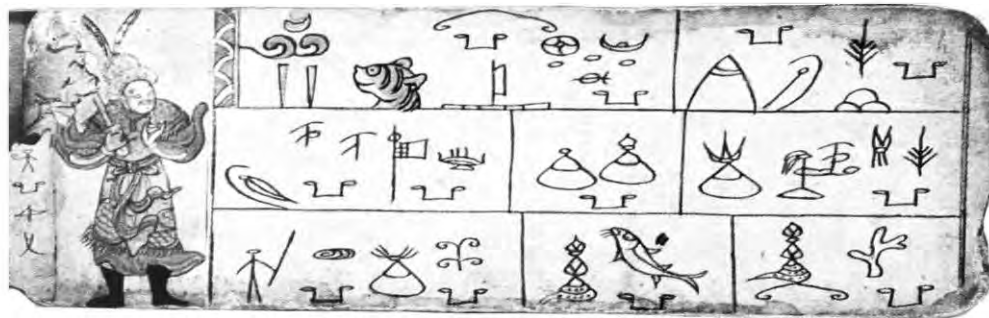
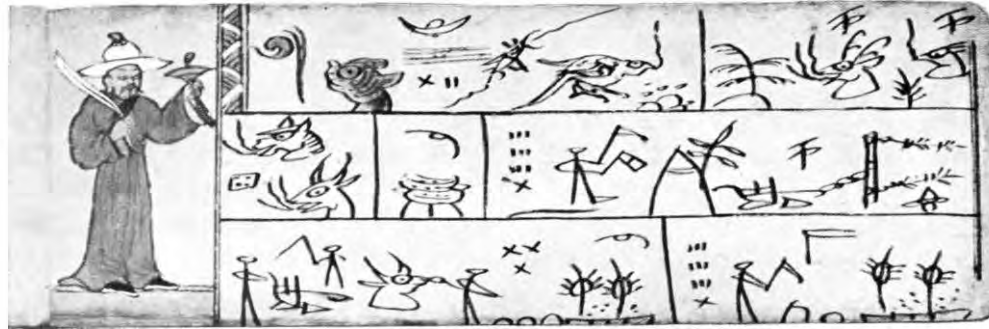
Professor Dr. G. Jayne hat im zweiten Teil die Papiere von acht verschiedenen <sup>1</sup>Na-<sup>2</sup>khi-Handschriften zusammen mit seiner Assistentin Dr. M. Harders-Steinhäuser im Institut für Cellulosechemie mit Holzforschungsstelle der Technischen Hochschule Darmstadt untersucht und mit anderen in Marburg vorhandenen zentralasiatischen Handschriften verglichen. Er kommt zu dem Ergebnis, daß „die <sup>1</sup>Na-<sup>2</sup>khi über Jahrhunderte hinweg die gleichen Papiersiebformate verwendet und auch nach demselben Verfahren gearbeitet haben“.

Beide Arbeiten werden durch eine Karte des <sup>1</sup>Na-<sup>2</sup>khi-Gebietes, eine Farbtafel mit jeweils der ersten Seite vier verschiedener illuminiertes Handschriften und zahlreiche Abbildungen ergänzt.

Marburg/Lahn, den 1. Oktober 1962

WOLFGANG VOIGT





Hs. or. 1593, Hs. or. 1529, K. or. 483 und Hs. or. 1594.



THE LIFE AND CULTURE OF THE NA-KHI TRIBE  
OF THE CHINA-TIBET BORDERLAND

BY

J. F. ROCK

WITH 12 ILLUSTRATIONS





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## ABBREVIATIONS

- AMRAR** - Rock, J. F. The Amnye Machhen Range and adjacent Regions. *Serie Orientale Roma*, XII, IsMEO, Roma. 1956.
- ANKEDD** - Rock, J. F. A <sup>1</sup>Na-<sup>2</sup>khi-English encyclopedic Dictionary in 2 Volumes. *Serie Orientale Roma*, XXVIII, IsMEO, Roma. 1962.
- ANKSWG** - Rock, J. F. The Ancient <sup>1</sup>Na-<sup>2</sup>khi Kingdom of Southwest China. *Monograph Series VII and VIII* (2 Vol.), Harvard-Yenching Institute. Harvard Press Cambridge, Mass. 1947.
- BDDANK** - Rock, J. F. Banishing the Devil of disease among the <sup>1</sup>Na-<sup>2</sup>khi. *National Geographic Society Magazine*, Vol. XLVI, No. 5, pp. 473-499. Nov. 1924.
- BODMSL** - Rock, J. F. The Birth and Origin of <sup>2</sup>Dto-<sup>1</sup>mba <sup>3</sup>Shi-<sup>2</sup>lo, the Founder of Mo-so Shamanism. *Artibus Asiae*, Vol. 7. Leipzig. 1937.
- CRC** - Graham, David Crocket. The Customs and Religion of teh Ch'iang. *Smithsonian Miscellaneous Collections*, Vol. 135, No. 1. December 8. 1958.
- CSTCR** - Rock, J.F. Contribution to the Shamanism of the Tibetan-Chinese Borderland. *Anthropos*, Vol. 54, 1959.
- DNPCONKW** - Rock, J. F. The <sup>1</sup>Na-<sup>2</sup>khi <sup>1</sup>D'a <sup>3</sup>Nv Funeral Ceremony with special reference to the Origin of <sup>1</sup>Na-<sup>2</sup>khi Weapons. *Anthropos*, Vol. 55. Fribourg, Switzerland. 1955.
- HL** - Rock, J. F. <sup>2</sup>Hä-<sup>3</sup>la or the Killing of the Soul as practiced by <sup>1</sup>Na-<sup>2</sup>khi Sorcerers. *Journal West China Border Research Society*, Vol. 8. Chengtu. 1936.
- MBC** - Rock, J. F. The <sup>2</sup>Müan-<sup>1</sup>bpö Ceremony or the Sacrifice to Heaven as practiced by the <sup>1</sup>Na-<sup>2</sup>khi. *Monumenta Serica*, Vol. XIII. Peking. 1948. Reprint: *Monumenta Serica*, Vol. XIII. Tokyo. 1948. Reprint: *Annali Lateranensi*, Vol. XVI, 9-158. Roma. 1952.
- NMSM** - Rock, J. F. The Nichols Mo-so Manuscript of the American Geographical Society. *Geographical Review*, Vol. XXVII, No. 2, pp. 229-239. New York. 1937.
- NSCRC** - Rock, J. F. The <sup>1</sup>Na-<sup>2</sup>khi Nāga Cult and Related Ceremonies. *Serie Orientale Roma*, IV (Parts I and II), IsMEO. Roma. 1952.

- OTLR** - Rock, J. F. The Origin of the Tso-la Books of Divination of the <sup>1</sup>Na-<sup>2</sup>khi. *Journal West China Border Research Society*, Vol. 8. Chengtu. 1936.
- QCTDR** - Hoffmann, Helmut. Quellen zur Geschichte der tibetischen Bon-Religion. *Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse*. Akademie der Wissenschaften und der Literatur. Mainz. Jg. 1950, No. 4.
- EKMGMG** - Rock, J. F. The Romance of <sup>2</sup>K'a-<sup>2</sup>mä-<sup>1</sup>gyu-<sup>3</sup>mi-<sup>2</sup>gkyi. *Bulletin de l'École Française d'Extrême-Orient*. XXXIX. Hanoi. 1939.
- SNKL** - Rock, J. F. Studies in <sup>1</sup>Na-<sup>2</sup>khi Literature: Part I, The Birth and Origin of <sup>2</sup>Dto-<sup>1</sup>mba <sup>3</sup>Shi-<sup>2</sup>lo; Part II, The <sup>1</sup>Na-<sup>2</sup>khi <sup>1</sup>Hä <sup>2</sup>zhi <sup>1</sup>p'i. *Bulletin de l'École Française d'Extrême-Orient*. XXXVII, fasc. 1. Hanoi. 1937.
- SOP** - Rock, J. F. The Story of the Flood in the Literature of the <sup>1</sup>Na-<sup>2</sup>khi Tribe. *Journal West China Border Research Society*, Vol. 7. Chengtu. 1935.
- ZKTRL** - Rock, J. F. The Zher-khin Tribe and their religious Literature. *Monumenta Serica*, Vol. III, fasc. 1. Peking. 1938.
- ZMFCNKSWC** - Rock, J. F. The <sup>2</sup>Zhi <sup>3</sup>mä Funeral Ceremony of the <sup>1</sup>Na-<sup>2</sup>khi of Southwest China. *Studia Instituti Anthropos*, Vol. IX. Wien-Mödling. 1955.

## INTRODUCTION

This is not intended to be an exhaustive treatise on the life and culture of the <sup>1</sup>Na-<sup>2</sup>khi, but a mere sketch to give those interested a brief introduction and insight into their history, their culture, religion and their daily life. The geography, climate, the animals, birds and plants that are to be found in <sup>1</sup>Na-<sup>2</sup>khi land are also briefly treated. Their language and religious literature have been exhaustively dealt with in many different works some of which are still available. The geography and history of the ancient <sup>1</sup>Na-<sup>2</sup>khi kingdom have been comprehensively treated in two well illustrated volumes published by the Harvard Press.

To do justice to the life and culture of the <sup>1</sup>Na-<sup>2</sup>khi would require a large volume. Time is getting short and the reader is implored to be lenient with the author for presenting this abridged story of a most interesting tribe.

The second part of this treatise gives the result of the examination of the paper of eight manuscripts of various degrees of antiquity, undertaken by Dr. Harders-Steinhäuser and Professor Dr.-Ing. G. Jayme, for which I wish here to express my thanks.

To the Deutsche Forschungsgemeinschaft and its representative Dr. W. Voigt I wish to express my appreciation for the great interest they have taken in the study of the literature of the <sup>1</sup>Na-<sup>2</sup>khi tribe, their mysterious ceremonies and beliefs which have given us an insight in the ancient pre-Buddhistic Bön religion of Tibet, a subject still very little known.

Last but not least I wish to tender my thanks to Mrs. A. Lester Marks for her counsel and encouragement.

Marburg/Lahn, Germany, Sept. 12. 1962

J. F. Rock



## THE LAND OF THE <sup>1</sup>NA-<sup>2</sup>KHI TRIBE

In the extreme southwest of the vast area which is China, there is the beautiful and mountainous province of Yün-nan – South of the clouds. This province – difficult of access – has the most diversified climate, from tropical heat to eternal snow. In the South the elevation is less than 300 feet but rises gradually till the 20,000 feet snowpeaks are reached which form the border between Yün-nan and Tibet. The central part of the province is a high plateau with an equable climate. As diversified as the terrain and climate is the population. In the extreme West there are few Chinese comparatively speaking, but the land is inhabited by many aboriginal tribes which do not encroach on each other. Climatic conditions decide the borders of their tribal territories. In the extreme South are the Shans, a rice-eating people, followed by the war-like Kachins, the Li-su and the Lu-tzu, the former occupying the southern part of the Salwin Valley and the latter the northern part extending across the Yün-nan border into Tibet. The Min-chia – the original inhabitants of the Nan-chao kingdom, – with Ta-li as their capital, dwell in the west central part of the province, but east of the Mekong. To the north of the Min-chia live the <sup>1</sup>Na-<sup>2</sup>khi. It is this tribe which concerns us most; they lived an isolated existence for nearly 2000 years and developed a culture of their own, little, or not at all, influenced by their neighbors except their northern ones – the Tibetans.

The area in which the <sup>1</sup>Na-<sup>2</sup>khi live today extends from 26° 05' to 27° 45' North Latitude, but in the West, along the Mekong, to 29° 05' North Latitude and from 98° 30' to 100° 10' East Longitude. The greater part of the area is situated in Western Yün-nan with a limited area in the extreme Southwestern part of Hsi-k'ang 西康, now again a part of Ssü-ch'uan (Szechuan), where the <sup>1</sup>Na-<sup>2</sup>khi are interspersed with the Ku-tsung 牯猿, as the Chinese call the Tibetans. The Mekong and the Yangtze dominate here the hydrography of the region although they flow in deep valleys and often in gorges several thousand feet deep. Wherever there is a level spot the tribespeople carry on their agricultural quests.

The Valley of the Mekong or Lan-ts'ang Chiang 瀾滄江, is not entirely occupied by the <sup>1</sup>Na-<sup>2</sup>khi within the geographical limits indicated. Tibetan villages are interspersed with <sup>1</sup>Na-<sup>2</sup>khi villages till the north-

westernmost border of Yün-nan is reached where the Tibetans predominate.

The densest concentration of <sup>1</sup>Na-<sup>2</sup>khi is within the Yangtze loop and along the banks of the Yangtze west and east of the loop. Li-chiang 麗江 which the <sup>1</sup>Na-<sup>2</sup>khi call <sup>2</sup>Yi-<sup>1</sup>gv and <sup>1</sup>Ngü-<sup>2</sup>bä, and the Tibetans Sa-tham ས་ཐམ་, is the capital of <sup>1</sup>Na-<sup>2</sup>khi land, situated at the southern end of the Yangtze loop. Most of the tributaries of both the Mekong and Yangtze have their rise in the high snow ranges which imprison them. Of the feeder streams of the Mekong in the area occupied by the <sup>1</sup>Na-<sup>2</sup>khi only one, the Yung-ch'un Ho 永春河 is worth mentioning, all the others are short; on this river the town of Wei-hsi 維西 is situated. Of the tributaries of the Yangtze only four are of importance. The longest is the <sup>2</sup>Yü-<sup>2</sup>ndo-<sup>1</sup>gyi, the Chinese Chung-chiang Ho 中江河, which descends from the high Chung-tien 中甸 plateau; the second is the <sup>1</sup>Shu-<sup>2</sup>gyi of the <sup>1</sup>Na-<sup>2</sup>khi or Zho Chhu ཞོ་ཅུ of the Tibetans which has its source on the high plateau of Hsi-k'ang in the North. The Chinese misnamed that stream; they mistook it for part of the Wu-liang Ho 無量河 which enters the Yangtze from the East, southeast of Li-chiang. I translated the <sup>1</sup>Na-<sup>2</sup>khi name of that river into Chinese and called it the T'ieh Ho 鐵河 or Iron River. Only the lower part of that river is, however, inhabited by the <sup>1</sup>Na-<sup>2</sup>khi. Further north we find the Shu-khiñ tribe and Tibetans. The third is formed by two streams, the <sup>1</sup>Gyi-<sup>1</sup>p'ër or Pai-shui 白水 and the <sup>1</sup>Gyi-<sup>1</sup>na or Hei-shui 黑水. Only below their confluence do we find <sup>1</sup>Na-<sup>2</sup>khi settlers. These streams have their source on the eastern slopes of the Yü-lung Shan 玉龍山 which extends up into the Yangtze loop and across the northwestern arm of that river. In the South, the springs which issue near Li-chiang form the northernmost source of the Yang-pi Chiang 漾濞江 which flows first south and then west into the Mekong. For more detailed information see maps II and III of IV of *ANKSWC*.

The town of Li-chiang is only 30 miles north of Min-chia territory, the ancient Nan-chao which was first called Liu-chao 六詔 or the six kingdoms of which the <sup>1</sup>Na-<sup>2</sup>khi territory was the sixth and northern most under their ruler Po-ch'ung 波衝, also known as king of Yüeh-hsi-chao 越析詔, A. D. 738. Li-chiang itself is at an elevation of 8200 feet, while the southern border is 700 feet lower, but rises to 10,000 feet in the northwest. Many of the <sup>1</sup>Na-<sup>2</sup>khi villages are, however, located at elevations higher than 10,000 feet.



To the East of the eastern loop of the Yangtze, the land is inhabited by the Mo-so 麼些 tribe to whom the <sup>1</sup>Na-<sup>2</sup>khi are related, the former, however, possess no written language.

### HISTORICAL SKETCH OF <sup>1</sup>NA-<sup>2</sup>KHI LAND

Before there was anything known about the southwestern area of China, a descendant of king Chuang 莊王 of the State of Chu 楚 one of the Contending States was sent in 280 B. C. to the Southwest to explore the upper reaches of the Yangtze and seize the territory which he called Tien 滇. This has remained until this day the classical name of Yün-nan. When he intended to return to Chu and report to his king he found that the State of Ch'in 秦 had attacked the State of Chu and so remained in Tien as the road was closed and proclaimed himself King of Tien or Tien Kuo 滇國.

It is of great interest to learn that in the years 1955-57 the Chinese carried on archeological excavations of royal tombs three miles west of the Hsien of Chin-ning 晉寧 at a mountain called Shih-chai Shan 石寨山, located some 20 miles south of K'un-ming 昆明. Among a great many bronze drums and objects of the greatest interest as hunting scenes and a plaque with symbols believed to be the earliest Yün-nan script, there was unearthed a golden seal bearing the characters Tien Wang 滇王, King of Tien. This dates back to the era of Chuang Ch'iao, the first king of Tien about 280 B. C. See Yün-nan Chin-ning Shih-chai Shan ku mu ch'ün = 雲南晉寧石寨山古墓羣 or Ancient tombs of the Stone village hill (near) Chin-ning in Yün-nan, published in Peking in 1959.

According to Chuang Ch'iao 莊躄 who conquered the eastern part of Yün-nan in 280 B. C., the land was inhabited by a savage tribe called the <sup>3</sup>P'u-man 濮蠻, who prior to the arrival of the <sup>1</sup>Na-<sup>2</sup>khi from the Northwest, occupied also the territory of Li-chiang.

The <sup>3</sup>P'u is a very ancient tribe of whom we know little or next to nothing. They are first mentioned under King Wu or Wu Wang 武王 of the Chou 周 Dynasty (1122-1116 B. C.). See *ANKSWC*, p. 88, note. The <sup>1</sup>Na-<sup>2</sup>khi tell us in their manuscripts of the <sup>3</sup>P'u eating their dead. See *ZMFCNKSWC*, pp. 168-171. A <sup>1</sup>Na-<sup>2</sup>khi proverb relates that in the beginning they were dependent upon the <sup>3</sup>P'u for their subsistence; the <sup>3</sup>P'u are figured in <sup>1</sup>Na-<sup>2</sup>khi manuscripts as agriculturists:

<sup>3</sup>P'u. A <sup>3</sup>P'u tribesman. The <sup>3</sup>P'u were the original inhabitants of Li-chiang. This symbol indicates that they were agriculturists and were



mainly engaged in growing rice as the symbol <sup>1</sup>khi = rice on the top of the symbol <sup>1</sup>dü = land indicates. He wields a hoe. The symbols on the top of his head are used phonetically, they are <sup>2</sup>p'u = a bubble and the second again <sup>1</sup>dü = land, but it can also be read <sup>2</sup>p'u-<sup>1</sup>lu = wool. The dots represent rice grains.

In their Manuscripts the <sup>1</sup>Na-<sup>2</sup>khi explain in an humorous way their dependence on the <sup>3</sup>P'u: "Before the birds were, the trees had been born; before the <sup>1</sup>Na-<sup>2</sup>khi had settled the <sup>3</sup>P'u were settled; where the <sup>3</sup>P'u had settled it was unnecessary to look for food (elsewhere), neither did the birds have to look for a roost".

Before the <sup>1</sup>Na-<sup>2</sup>khi had completely ousted the <sup>3</sup>P'u, they lived in limestone caves in which the region abounds as all of the mountains in the district are of limestone.

The whole western region was called by the Chinese the land of the Southwestern Barbarians and was first opened in the first year of Han Wu Ti 漢武帝 (period Yüan-shou 元狩, 122 B. C.). The first Chün 君 or political division of the region in which Li-chiang is situated was established as Yüeh-sui 越隴 during the reign of the above Emperor (140-87 B. C.) and the actual district or hsien in which it is located was called Ting-tso hsien 定祚縣. (For further political developments see *ANKSWC*, pp. 61-65).

Hsieh-lung 邪龍 district lay to the northeast of Li-chiang and was established in the 12th year of Han Ming Ti 漢明帝, A. D. 69. It was there that the first <sup>1</sup>Na-<sup>2</sup>khi settled in A. D. 24, and which they called La-bbū, the Chinese La-pao 刺寶. Long before Li-chiang appears in history, the <sup>3</sup>P'u had occupied the region.

During the Sung dynasty (A. D. 960-1126) the <sup>1</sup>Na-<sup>2</sup>khi having multiplied and become stronger, dispossessed the <sup>3</sup>P'u and established themselves under their leader <sup>2</sup>Ts'u-<sup>2</sup>ts'u 醋醋. This <sup>1</sup>Na-<sup>2</sup>khi is mentioned in one of their manuscripts called <sup>1</sup>Ts'o-<sup>2</sup>mber <sup>3</sup>ssaw as <sup>2</sup>Muan-<sup>2</sup>zä <sup>2</sup>Ts'u-<sup>2</sup>ts'u, the first part being the name of his father (see *MBC*, p. 75; *ANKSWC*, pp. 80-81). However, the first ancestor of the <sup>1</sup>Na-<sup>2</sup>khi rulers is given as Yeh-ku-nien 葉古年 who lived during the period Wu-te 武德, A. D. 618-626 of the T'ang dynasty. He was followed by twenty generations, the twentieth being Mu Te 木得, the first chief of Li-chiang to bear the family name Mu 木 (*ANKSWC*, p. 69). Yeh-ku-nien is also called Yeh-ku-cha 葉古乍, the last character being easily mistaken for nien 年. He is thus mentioned in the Mongol History as having conquered the territory, anciently called San-t'an 三聿, east of the Li-chiang, that is the Yang-

tze, at the foot of the snow range (Yü-lung Shan), then inhabited by the <sup>3</sup>P'u tribe. This San-t'an is identical with the Tibetan Sa-tham ས་ཐམ་, the <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Ssa-<sup>2</sup>ddo or <sup>2</sup>Ssan-<sup>2</sup>ddo. It was also the name of a famous lJang ལྷམ་ king with whom Kesar of Ling fought battles - lJang is also the Tibetan name for the <sup>1</sup>Na-<sup>2</sup>khi. The name Ssan-ddo has survived among the <sup>1</sup>Na-<sup>2</sup>khi; he is venerated as a hero who rode a white horse and mysteriously succoured <sup>1</sup>Na-<sup>2</sup>khi warriors when engaged in battle (see *ANKSWC*, pp. 194-195). He is the patron deity of the <sup>1</sup>Na-<sup>2</sup>khi today and is revered as the mountain god of the Li-chiang Snow Range. A manuscript called <sup>2</sup>Ssan-<sup>2</sup>ddo or <sup>2</sup>Ssa-<sup>2</sup>ddo <sup>3</sup>shu is devoted to him; it is written in pictographs and contains transcriptions of Tibetan mantras.

In T'ang T'ien-pao 唐天寶 A. D. 755, the territory was captured by the Tibetans, but afterwards it became part of the Nan-chao (Kingdom). There seem to have been many skirmishes between the various tribes and the land changed hands for short periods.

The <sup>3</sup>P'u, for a time, regained control of their former territory till the advent of Yeh-yeh 爺爺 who is considered the first generation of the <sup>1</sup>Na-<sup>2</sup>khi rulers of Li-chiang after the <sup>3</sup>P'u had again been defeated. He lived during the end of the northern Sung 宋 dynasty A. D. 1101-1125. Yeh-yeh was originally a Mongol, but his ancestry is somewhat obscure (see *ANKSWC*, pp. 73-74).

The name Li-chiang, Beautiful River, was given the town and district by Kublai Khan in 1254. It was also the name of the Yangtze which, during the T'ang Cheng-yüan 唐貞元 period (A. D. 785-804) bore the name Li-shui 麗水 or Beautiful Water, from which the name Li-chiang is probably derived. The name Li-chiang has been retained during all the successive dynasties while other district cities had their names changed. Owing to the moral degeneration of the <sup>1</sup>Na-<sup>2</sup>khi rulers, the inhabitants of Li-chiang in 1723 sent emissaries to the capital of Yün-nan to petition the viceroy to nationalize their territory and establish transferable officials (magistrates). Viceroy Kao Ch'i-cho 高其倬 of Yün-nan memorialized the throne to abolish the hereditary T'u-ssu 土司 or chiefs of Li-chiang. Mu Chung 木鐘, the then ruling chief, was thereupon demoted to native subprefect and a Chinese magistracy was established. The district became nationalized on the 31st of May, 1723. After that the native subprefects ruled in name only and during the Republic lost all their private land and all power. The last ruling subprefect, Mu Sung-kuei 木松奎, who was the 33rd generation, was born November 7, 1929 and, after the advent of the Communists, was reputedly executed.

According to the communist map of China and their autonomous administrative units of November 1958, the area within the Yangtze loop is designated as an Autonomous Hsien (*AH*), while the region to the west of the Yangtze with Chung-tien 中甸 is designated as an Autonomous Chou (*AC*). The area inhabited by the Mo-so to the east of the Li-chiang (Yangtze) is also an Autonomous Hsien (*AH*) with Ning-lang 寧蒗彝 as the hsien town. No one knows what has become of the friendly Mo-so native rulers, the descendents of A Ying-jui 阿應瑞 and the jovial abbot A Shao-fu 阿少符 of the Yung-ning monastery.

#### GEOGRAPHY OF THE REGION

The Yü-lung Shan 玉龍山, or Jade Dragon Mountain, of the Chinese and the <sup>2</sup>Boa-<sup>1</sup>shi <sup>2</sup>Nv-<sup>2</sup>lv of the <sup>1</sup>Na-<sup>2</sup>khi (see *ANKSWC*, pp. 212-247) is the main mountain range in the center of <sup>1</sup>Na-<sup>2</sup>khi land composed mainly of limestone, while in the valleys we find shale and schist. There is also evidence of former volcanic activity, indicated by small craters superimposed on the limestone at the southern end of the snow range. Hot springs are to be found to the north and south of Li-chiang as well as on the banks of the Yangtze near its entrance in the <sup>3</sup>A-<sup>2</sup>tsan-<sup>3</sup>gko gorge nearly 10,000 feet deep, cut by the Yangtze through the Li-chiang Snow Range. Lakes are scattered over the landscape, but nearly all are formed by ground water and are not permanent being dependant on the rainfall. There are also many limestone caves often with stalagmites and stalactites and beautiful sinter terraces formed by carbonate-of-lime-bearing springs. During the winter, or dry season, the water supply is derived from springs which have very rarely failed. The water is carefully distributed and is under the jurisdiction of an official appointed for that purpose. During the summer rains, fields need not be irrigated. The water is crystal clear, but being derived from springs, the streams have no fish, although fish are common in the lakes. (For description of the region see *ANKSWC* where the geology, botany, sinter terraces, etc. are fully discussed). See Plate I.

## CLIMATE

The climate naturally varies considerably depending on the altitude. Li-chiang itself, at 8,200 feet elevation, enjoys a moderate, temperate climate with the rainy season in the summer when the Monsoon blows from the west and the dry season in the winter, with turquoise-blue skies from the middle of October till June. The winter winds blow from November to April with a velocity of sufficient force to lift heavy tiles from the roofs. The temperature in the winter rarely drops below 30° or 28° F. in Li-chiang, but is lower at higher altitudes. The valleys, as those of the Mekong and Yangtze, are very hot, the temperature rising to over 100° F. in the winter. In the summer, the temperature is cool owing to the rains and overcast condition of the sky. Electrical storms and hail are prevalent, but cyclones and floods are absent owing to the altitude of the terrain. Snow is common higher up, but is rare in Li-chiang where it melts on falling to the ground. All in all the region enjoys a primavera eterna.

## VEGETATION AND FAUNA

The mountains of the Li-chiang area are beautifully forested, the lower slopes with the yellow pine (*Pinus yunnanensis*) and higher up with the white pine (*Pinus armandi*), various spruces, hemlocks, and balsam firs. Among the latter grow many beautiful rhododendrons and cane-brake, while masses of lovely flowers dot the alpine meadows. The rocks and screes are covered with saxifrages, crucifers, composites, etc. Primulas grow along the lake shores and high up on the alpine meadows, interspersed with blue and yellow poppies (*Meconopsis*). Mighty evergreen oaks (*Quercus semicarpifolia*) grow on the mountain slopes with mixed forest and in the western Yangtze valley at an elevation of 11,000 feet. Larches often grow above the firs and spruces, as high as 15,000 feet while poplars and willows line the alpine streams and cover the lower slopes down to 9,000 feet.

Unlike the Lo-lo and the Chinese the <sup>1</sup>Na-<sup>2</sup>khi do not despoil the forests indiscriminately and wantonly but they also plant no trees, the science of forestry is unknown.

In the dry valleys and limestone gravel a semi-xerophytic vegetation is encountered composed of such stiff shrubs as *Sophora viciifolia*, *Bauhinia yunnanensis*, *Osteomeles schwerinae*, bushy oaks with spiny holly-

like leaves, *Pistacia weinmannifolia*, *Terminalia franchettii*, *Hibiscus aridicola* and *Wickstroemia lichiangensis*, etc.

Of the fauna of the region, the brown deer occurs in the pine forest and the muntjak or black deer (*Muntiacus lacrimans*) in the spruce forest while stags and muskdeer (*Moschus moschiferus*) are to be found at higher elevations. Leopards are numerous on the Li-chiang snow range and in former times, according to old <sup>1</sup>Na-<sup>2</sup>khi, tigers also roamed the dense spruce and fir forests. The leopards are only dangerous to domestic animals and do not attack humans. The goral, the serow and blue sheep are to be found on the high limestone crags, while in the dense forests the black bear (*Ursus torquatus*) with a whitish-yellow breast abounds. Foxes and small pandas occur on the lower slopes in the pine forests. The former are mostly along the lake shores on the hunt of ducks, the latter on the pine trees in search of pine-nuts. Native moles, rats, porcupines and wildcats are not uncommon nor are weasels and a species of wild dog called <sup>3</sup>khyü-<sup>2</sup>k'ö, which frequents the alpine meadows. In the hotter valley of the Yangtze and its tributaries, two species of monkeys are plentiful. They often descend on the fields of the farmers ravaging their crops. Several species of flying squirrels (a large species *Petaurista alborufus ochrapsis* and a smaller species *Pteromys [Hylopetis] alboniger orinus*) live in limestone caves from which they volplane onto the tops of trees during the night to feed on the foliage. See Plate II. Innumerable birds are everywhere. Of especial interest are the game birds such as the Tibetan eared-pheasant, *Crossoptilon crossoptilon*, which roams in flocks on the high alpine slopes. See Plate III. High among the rocks at 14,000 feet occurs the rare <sup>1</sup>K'aw-<sup>2</sup>k'aw *Pucrasia meyeri* and higher still, in pairs, the *Lerwa lerwa major* and snow chicken *Tetragallus tibetanus henrici*. In the spruce forests the Amherst pheasant *Chrysolophus amherstiae* roosts as well as several species of *Ithaginis* (blood pheasant) of gorgeous plumage. The ordinary ring-neck pheasant *Phasianus colchicus elegans* frequents the lower slopes at 9,000–10,000 feet. Snipes are found along the streams, and, in the winter, the black-necked crane *Grus nigricollis* together with various species of duck, as the Sheldrake, the grebe and the mallot are common on the lake shores and lakes, while near them herons and king fishers perch on pine trees. The merganser dive and fish in the larger streams as do the cormorants in the lakes.

Hoopoes, cuckoos and goatsuckers are to be found in the lowlands from 8,000 feet up, and in the hotter valleys fruit pigeons *Columba hodgsonii* and turtledoves roost in trees. Snow pigeons *Columba leuconota gradaria* inhabit the higher valley floors near glaciers, and the chough *Pyrrhocorax pyrrhocorax himalayanus* the alpine meadows where they disport them-

selves in great flocks. There are two species of parrots of the genus *Psittacula* which can often be seen flying over the snow range from pine forest to pine forest in search of nuts.

For a detailed account of the Avifauna see *Proceedings U. S. National Museum*, Vol. 70, pp. 1-70, (1926); Vol. 80, pp. 1-91, (1931), Birds collected by Dr. J. F. Rock; *Bulletin of the Museum of Comparative Zoology*, Vol. 74, No. 5, pp. 109-168, Birds from Northwest Yün-nan (1933), collected by Dr. J. F. Rock.

### COMMUNICATION

There were no roads in our sense of the word in <sup>1</sup>Na-<sup>2</sup>khi land, and no vehicles of any kind, not even a wheelbarrow, in the entire province of Yün-nan, hence no necessity for a road. Travel was done on foot or by horse or mule and transportation of supplies by mule caravan along endless trails.

Chinese-built roads were execrable and connected only the major towns in the province. These so-called roads were paved over a thousand years ago and never repaired, their width rarely exceeded 3 or 4 feet, and in the rainy season were impassable. There were more interstices than rocks and the former were filled with mud often more than a foot deep. Most of these "paved" roads were avoided by mule caravans who often made their own roads to each side of the paved road. These became regular trenches and were abandoned because the bottoms of the loads began to scrape on the paved part of the trail. None of the roads were graded and when a road approached a hill it meant a frontal attack no matter how steep the hill. The paving stones were of unequal size and could be found at the bottom of the hills when they had not been picked up long ago for the construction of farm enclosures. Officials paid no attention to any repair, for when they traveled they were carried in chairs and the coolies had to watch out where they stepped. This developed a regular improvised conversation in rhyme between the coolies regarding what they encountered, loose rocks, holes, mud, dead animals or other obstacles.

From Li-chiang on northward there were no paved roads and in the winter it was a pleasure to ride on dirt roads through the forests and over meadows. Only when one approached a village the roads became bad because the farmers encroached on them. Their thorny hedges hung over the roadbeds and in addition all the rocks they found in their fields were thrown onto the road. The traffic became the steamroller.

The only lines of communication were trails, and they led East, South, North and West. A trail led east to Yung-sheng 永勝, the former Yungpei 永北; one south to Ho-ch'ing 鶴慶; one west to Shih-ku 石鼓 and beyond, over the Li-ti-p'ing 栗地坪 to the district of Wei-hsi 維西, passing through the small <sup>1</sup>Na-<sup>2</sup>khi settlement of Lu-tien 魯甸 where the <sup>1</sup>Na-<sup>2</sup>khi speak a mixture of <sup>1</sup>Na-<sup>2</sup>khi and Tibetan. To the north, a trail extends up the Yangtze loop to <sup>2</sup>Ndaw-<sup>2</sup>gy the Chinese Ta-ku 打鼓, La-pao 刺寶 and, by a primitive wooden boat rowed by hand or by inflated goat-skin raft, across the Yangtze to Yung-ning 永寧 in Mo-so land. See Plate IV. On that route there are no inns and caravans must camp out on meadows, where mules are subject to attack by leopards.

All these various trails were practically endless as evidenced by the northern one over the snow range which continued to Mu-li 木裏, Tatsien-lu 打箭爐, the former capital of Hsi-k'ang but now again in Ssû-ch'uan, which necessitated crossing the Ya-lung by rope bridge or dug-out canoe, depending on the season, and on and on to A-mdo and Ch'ing-hai, Mongolia and Hsin-chiang 新疆. The eastern trail continued to K'ung-ming 昆明, Kwei-chou and on to Central South China, while the western one led to Tsha-rong 藏戎 the Chinese Ch'a-wa-lung 察瓦龍 in Southeast Tibet and on to Lhasa. The southern one ended in Burma *en route* to Siam. But scarcely ever did the <sup>1</sup>Na-<sup>2</sup>khi leave their home land, except muleteers who, however, rarely went beyond Ta-li 大理 and never beyond K'ung-ming, but certain <sup>1</sup>Na-<sup>2</sup>khi traders made the journey to Lhasa twice a year, a single trip taking three months. During the opium trade, caravans carried the raw opium to Ssû-ch'uan where it was most in demand.

#### THE ORIGIN OF THE <sup>1</sup>NA-<sup>2</sup>KHI TRIBE

From their ancient manuscripts, we learn that the ancestors of the <sup>1</sup>Na-<sup>2</sup>khi dwelt in the grasslands of the Far Northwest where they lived in white felt tents (yurts). They consider their first ancestor to have been <sup>2</sup>Müan-<sup>3</sup>llü-<sup>1</sup>ddu-<sup>2</sup>ndzi a more or less mythical being who is equivalent to the Mongol Äbghän, the white old man and national god of the Mongols. He is also worshipped by the Tibetans who call him Mi-tshe-ring མི་ཚེ་རིང་ and sGam-po-dkar-po སྐམ་པོ་དཀར་པོ།. The Chinese venerate him also as the god of longevity and call him Shou-hsing 壽星. He is figured with a high



forehead, and long white beard. No less than twenty-two <sup>1</sup>Na-<sup>2</sup>khi manuscripts are devoted to him and quite a number to his wife and sons. Like the Mongols and Tibetans, the <sup>1</sup>Na-<sup>2</sup>khi venerate him and worship him also as a god. He is their tribal deity and they count their descent from him. To the Mo-so, who live to the northeast of the <sup>1</sup>Na-<sup>2</sup>khi and east of the Yangtze, he is unknown. <sup>1</sup>Na-<sup>2</sup>khi depict him similar to the Chinese but he is not surrounded by small children, yet both figure him in the company of deer. A <sup>1</sup>Na-<sup>2</sup>khi legend relates that it was a deer which led him out of the realm of the <sup>1</sup>Ddv demons (in hell) where he had been decoyed (see *NNCRC*, p. 79, note 10, Plate 17).

The <sup>1</sup>Na-<sup>2</sup>khi originally lived in the grassland of Northeastern Tibet where they were neighbors of the Mongols. They were nomads herding their yak and sheep. They milked their mares, as I recently discovered in one of their manuscripts, on the left side while the yak they milked on the right. They became hunters when, evicted by the Chinese, they were forced to hunt on their migration south to their present home. That they were a branch of the Ch'iang 羌 there is little doubt. They still perform their earliest ceremony <sup>2</sup>Müan <sup>1</sup>bpö (the Propitiation of Heaven) to which, after having become settlers and tillers of the soil, they later added the Propitiation of the Earth. Their great ancestor was represented at that ceremony by a juniper tree which, in later years (during the Mongol period), represented the Emperor whom they called <sup>1</sup>K'aw (a Mongol loan word derived from Khan, see *MBC*, pp. 7-14).

The Ch'iang, at least those, who now live in the northwestern part of Ssü-ch'uan in the district of Li-fan west of the Min River, performed and still enact a similar ceremony propitiating Heaven in their sacred groves. D. C. Graham in *CRC*, pp. 60, 120 describes what is apparently the equivalent of the <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Müan (<sup>1</sup>bpö) ceremony when the Ch'iang pray in their sacred groves to the sky god, Heaven is apparently meant called Mu (bya-sei) undoubtedly identical with the <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Müan (the last two letters are not pronounced but impart to the vowel "ü" a nasal sound). They also propitiated the Earth Ru, (bya-sei) <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Llü for earth; the latter have nor "r" in their language and "l" and "r" are interchangeable. I believe that the words "bya-sei" are actually not part of the name for they occur for both Heaven and Earth. The five great gods of the Ch'iang we find also in the <sup>1</sup>Na-<sup>2</sup>khi pantheon where they are worshiped as the gods of the five elements. On their paintings they usually appear as the uppermost row. It is to be regretted that Graham did not make copies of what he calls the "sacred books" of the Ch'iang for the sake of comparison with the <sup>1</sup>Na-<sup>2</sup>khi books of divination. Ch'iang villages are renowned for their

tall towers, probably built to guard against invaders. While <sup>1</sup>Na-<sup>2</sup>khi villages possess no such towers there are, however, strongly built towers in the Mekong Valley and in the valley of the <sup>1</sup>Shu-<sup>1</sup>gyi or Zho Chhu River now in Mu-li erected by the <sup>1</sup>Na-<sup>2</sup>khi during the early part of the Ming dynasty to guard against Tibetan robber tribes who lived to the north of them (see *ANKSWC*, Plate 169; *ZKTRL*, Plate 3a). For more detailed accounts as to the origin of the <sup>1</sup>Na-<sup>2</sup>khi see *ANKSWC*, *SNKL*, *NNCRC*, *ZMFCNKSWC*, *DNFCONW* and *MBC*.

The <sup>1</sup>Na-<sup>2</sup>khi tribe is composed of several clans based on the four clans established by the four sons of one of their post-flood ancestors, namely <sup>2</sup>Gkaw-<sup>1</sup>lä-<sup>3</sup>ts'ü. These four sons took the names of <sup>1</sup>Ho, <sup>1</sup>Mä, <sup>1</sup>Yu and <sup>3</sup>Ssu. The actual existing clans today are the <sup>2</sup>Gv-<sup>1</sup>hö, <sup>2</sup>Gv-<sup>1</sup>ndza, <sup>3</sup>P'u-<sup>1</sup>dtv and <sup>2</sup>Gv-<sup>1</sup>här, the latter are the least numerous (see *MBC*, pp. 10-11). It is known that the <sup>3</sup>P'u-<sup>1</sup>dtv and the <sup>2</sup>Gv-<sup>1</sup>ndza belong to the <sup>3</sup>Ssu clan, and that the native <sup>1</sup>Na-<sup>2</sup>khi rulers were descendents from the <sup>1</sup>Yu clan who are now regarded as belonging to the <sup>2</sup>Gv-<sup>1</sup>hö.

In ancient days the <sup>1</sup>Na-<sup>2</sup>khi had no family names and only during the time of the ruling <sup>1</sup>Na-<sup>2</sup>khi family, who itself was given the Chinese name Mu 木, or tree by Emperor Hung-wu 洪武 of the Ming dynasty in 1390 did the <sup>1</sup>Na-<sup>2</sup>khi peasants adopt the name Ho 禾, a name not occurring among the hundred Chinese family names. The <sup>1</sup>Na-<sup>2</sup>khi have a sarcastic explanation of that character composed of the phonetic 禾 ho and the radicle k'ou 口 or mouth. The first character, if divested of the upper stroke, leaves the radical Mu 木, or tree, while 禾 means grain. The <sup>1</sup>Na-<sup>2</sup>khi interpreted their family name Ho as feeding the mouths of the Mu family with grain, as their taxes were mostly paid in kind, or partly so.

During the rule of the <sup>1</sup>Na-<sup>2</sup>khi king Mu Sheng-pai 木生白 (A. D. 1598-1646) <sup>1</sup>Na-<sup>2</sup>khi culture exceeded that of all of its neighbors by thoroughness of organization. They were great warriors, they had fought the T'ang dynasty troops and helped defeat them in conjunction with the Nan-chao 南詔 troops of Ta-li as a memorial stone at T'ai-ho hsien 太和縣 relates. They fought with the Mongol troops of Kublai Khan in their attack on Burma and later were recruited and fought in Chinese units pacifying other tribes and rebels.

The basic social unit was the village; headmen of villages were appointed, but the <sup>1</sup>Na-<sup>2</sup>khi chief held the right of life and death over his subjects. They are an easily ruled, honest people, but when unjustly dealt with by Chinese magistrates, as was the case during my residence, they simply took the law into their own hands and drove the magistrate out of the district.

<sup>1</sup>NA-<sup>2</sup>KHI CULTURE

After the <sup>1</sup>Na-<sup>2</sup>khi emerged from cave dwelling, they built houses of wood with shingle roofs weighted down with rocks, still in vogue in <sup>1</sup>Na-<sup>2</sup>khi villages of <sup>2</sup>Bbčr-<sup>2</sup>ddēr (北地 Pei-ti) in the Chung-tien district 中甸縣 (see *ANKSWC*, Plates 96, 132). Still later, they built their houses of mud-bricks or limestone with a wooden superstructure. Certain females were renowned for the making of these bricks and tamped earth walls, apparently having been singled out for doing so (see *ZMFCNKSWC*, pp. 126-130, note 16). After driving the <sup>3</sup>P'u south and north into the mountains, the <sup>1</sup>Na-<sup>2</sup>khi occupied their fields and carried on primitive agriculture, but they still herded their sheep and yak on the alpine meadows.

In a *ms.*, <sup>1</sup>Yü <sup>2</sup>ndzi <sup>3</sup>mi, <sup>2</sup>haw <sup>1</sup>shi, we are told about the entire <sup>1</sup>Na-<sup>2</sup>khi economy (see *ZMFCNSWC*, pp. 152-159) viz: The boy went up the mountain to cut the <sup>2</sup>mbbūe-<sup>1</sup>shi or yellow oak, to make a plow. From the white pine, he made the <sup>1</sup>ndshčr-<sup>2</sup>gkv, or the main shaft of the plow (see *NNCRC*, p. 445, note 774). From <sup>2</sup>law-<sup>1</sup>k'aw or poplar wood, he made the yoke for the oxen. From the <sup>3</sup>nyi-<sup>2</sup>erh (*Clematis montana*) or the <sup>2</sup>tsan-<sup>2</sup>yi-<sup>3</sup>dshi (*Hölboellia fargesii*) he made the loop or <sup>2</sup>yi-<sup>3</sup>dshi and from the bamboo, he made the <sup>2</sup>yi-<sup>2</sup>ndshi or lead rope. From rhododendron wood (*Rhododendron decorum*), he shaped his hoe or <sup>1</sup>mun-<sup>2</sup>ss <sup>2</sup>dsho-<sup>1</sup>bpa. The plowshare, he made from iron, which he obtained from the <sup>2</sup>Boa (the colloquial for the <sup>3</sup>P'u). The latter also made iron pots and pans and steel sickles. The handles for these, the <sup>1</sup>Na-<sup>2</sup>khi made of yellow pine wood.

To dry the grain, the <sup>1</sup>Na-<sup>2</sup>khi obtained from the <sup>2</sup>llü-<sup>1</sup>p'ěr or spruce (*Picea likiangensis*), the uprights for the grain rack and for the cross pieces he used the trunks of small white pines (*Pinus armandi*). For threshing the grain, he had to secure wood for the shaft of the flail. For this he used the juniper, and out of the <sup>2</sup>k'ö-<sup>2</sup>ss (*Cotoneaster* spp.), he made the flail. To winnow the grain, he went into the deep valley and cut bamboo which the women braided to make the <sup>1</sup>mun. The winnowing was done by the women. For measuring the grain and for storing it, the <sup>1</sup>Na-<sup>2</sup>khi made a box from the wood of the white pine, and from bamboo the women braided a hamper. They husked their grain in stone mortars, hollowed out of black rock, for the shaft of which, they used the wood of the holly-oak (*Quercus semicarpifolia*). The pestle they made from the white pine.

They made liquor by steaming the grain, and for yeast or ferment they used the <sup>2</sup>Nyi-<sup>1</sup>p'ěr-<sup>1</sup>baw (an alpine plant *Lomatogonium cuneifolium*). The making of yeast is described in *ZMFCNKSWC*, p. 155, as is also the making of wooden tubs out of yellow pine wood, with hoops made out of

the bark of a tree called <sup>2</sup>wu-<sup>1</sup>p'ēr-<sup>1</sup>ndzēr, the identity of which is not known. Resin was used to stop the leaking of the tubs – this, a bird (the fruit pidgeon) the <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>ghügh-<sup>2</sup>to-<sup>1</sup>li (*Columba hodgsoni*) taught them how to obtain. The *ms.* continues to tell of the making of the different liquors, and of the <sup>2</sup>gko-<sup>3</sup>bpä, <sup>1</sup>dtv-<sup>3</sup>lv and <sup>2</sup>ndshër made of various grains as rice and wheat (see *ZMFCNKSWC*, p. 159, notes 33–37). Their main bread which is called <sup>3</sup>lä-<sup>2</sup>la in *mss.*, and colloquially <sup>1</sup>bpa-<sup>2</sup>lä, is made out of wheat flour, soda and water and baked in hot ashes as the <sup>1</sup>Na-<sup>2</sup>khi have no ovens.

The <sup>1</sup>Na-<sup>2</sup>khi made all utensils of various woods. They carved the <sup>2</sup>lo, a large wooden platter. They had no knowledge of the potter's wheel and made no jars or cups of clay. Whatever pottery came into use later they obtained from the Min-chia tribe to the south of them.

They grow walnuts and persimmons. From the former, they expressed an oil to use for cooking and for light. Other plants from the seeds of which they extracted oil were rape, hemp (*Canabis sativa*) and the purple fruits of the <sup>3</sup>shu-<sup>1</sup>ddaw (*Prinsepia utilis*).

The women wove hemp cloth from the fiber of *Canabis sativa* or <sup>2</sup>ssaw which every family cultivated near their home. From the fiber of the male plant, ropes were made, while from the fiber of the female plant, they wove cloth three or four inches wide, and of considerable length. For finer cloth, old women wove the fine white epidermis of a wild composite (*Gerbera delavayi* Franch.) into the hemp.

The men now wear trousers and jackets of blue cotton drilling, but in the winter wear a vest of bear or goral skin. On their head they usually wear a dark blue cotton turban, or a white one when in mourning.

The <sup>1</sup>Na-<sup>2</sup>khi have no games save a type of chess played with ordinary pebbles. In ancient days, they practiced archery. Theatrical performances other than those staged by traveling Chinese minstrels are unknown. But on festive occasions (such as births, marriages or funerals) dances take place. On these occasions, men and women face each other and dance in forward and backward movements without touching. At funerals of old men, only men dance in a circle around a bonfire, they change frequently. The leader is selected because of his good voice. He either chants a saga of the good qualities of the deceased or an old funeral song called <sup>2</sup>Zä <sup>1</sup>zä <sup>2</sup>ts'o – a stanza at a time which is repeated by the other men in the circle, all holding hands. Such dances are carried on all night as there are no sleeping accommodations for so many visitors as attend the funeral of an old man (see *ZMFCNKSWC*, pp. 11–12). Most of their songs are improvised, and when they travel they sing a song called <sup>1</sup>Gkwuo-<sup>3</sup>t'khi. It usually

begins in a high pitched voice with the syllable Eh eh eh eh eh eh after which follow a few improvised words. It usually tells of the bitterness of life, <sup>2</sup>t'khi means cold, sad. For secret oral communications they use the <sup>3</sup>K'a-<sup>2</sup>kwuo-<sup>1</sup>kwuo, Jew's Harp, but only young people carry them (see *RKMGMG*, pp. 7-13; Plates 10 and 11). Of other musical instruments, bamboo flutes and a type of guitar were in use. See Plate V.

They made felt of the wool of sheep. At first a bamboo screen was braided, the size of the felt to be made. It was placed on the ground and the sheep wool spread out evenly on top of it. Hot water was then sprinkled over it and the whole rolled up. Afterwards another layer of wool was added and the process repeated three or four times depending on the thickness and quality of felt desired. It was rolled with the feet at a fast tempo. This was called <sup>2</sup>k'ö-<sup>1</sup>lv <sup>2</sup>ndër <sup>3</sup>sso (see *ZMFCNKS WC*, p. 137, note 28).

According to an ancient manuscript, they must have had pickled fish for their dead were instructed to catch fish when they had arrived at a certain lake and pickle them and also to make a pickled vegetable out of the <sup>2</sup>gyi-<sup>2</sup>k'v, a fresh water plant. Though I never heard of pickled fish, I did come across the pickled vegetables.

In ancient days they lived of the spoils of hunting. The stag meat was roasted over coals; from the deer meat they made soup; from the muskdeer a dish of meat with vegetables was prepared; of the bear, the ribs were cooked and eaten; and from the wild pigs they caught in the pine-covered hills, they made <sup>1</sup>bu-<sup>1</sup>ch'ër, a meatless, boneless pig which they used for mattresses and later ate themselves or presented to friends on New Year's (see *ANKSWC*, Plate 241). See Plate VI.

Of domestic animals, they reared cattle, horses, yak, sheep, chickens and dogs - the latter to accompany them on their hunts. As they had no firearms, they hunted with bow and arrows, but more commonly used traps of which they had several types.

The men hunt deer, muskdeer, stag, blue sheep, goral, and serow. Of the latter, they eat the meat and of the skins make sleeveless jackets. Fox, small panda, lynx, wild cat, leopard and various types of weasels are hunted for their skins.

The <sup>1</sup>Na-<sup>2</sup>khi love milk products such as butter and a type of cottage cheese similar to the cheese of the nomad Tibetans. Butter is made from yak milk and is only used for local consumption. The butter is packed either in birch bark or in a sheep's stomach. It is smelly and rancid like the Tibetan butter and is dirty according to our standards. When <sup>1</sup>Na-<sup>2</sup>khi travel they carry butter, roasted barley flour and tea, and like the Tibetans,

they add butter and salt to the hot tea and churn it. They make a dumpling in their tea bowls with their fingers by kneading the roasted barley flour with the buttered tea.

They raise chickens, but no <sup>1</sup>Na-<sup>2</sup>khi will eat eggs, especially a sick person, for eggs are used at certain religious ceremonies, as for example at <sup>3</sup>Dtv <sup>1</sup>bpö and <sup>2</sup>Müan <sup>1</sup>bpö to ward off evil coming from the sky.

Pork and mutton are the only meat and may be served but once a month. Once a year one large sow is slaughtered which must last a family of five for one year.

The climate being very favorable, the <sup>1</sup>Na-<sup>2</sup>khi can grow several types of crops on the same land each year. They grow a winter wheat, lentils, yellow peas, barley, very little oats and, in favorable areas, rice. Their main vegetable crops are green and white Chinese cabbage, parsley, turnip, beans, cucumbers, and egg plant. A specialty is the cultivation of a native lily (*Lilium davidii*), the scales of the bulb being steamed or stuffed with meat and eaten.

One of the most useful plants is a turnip (*Brassica rapa depressa*) the <sup>1</sup>Na-<sup>2</sup>khi call <sup>2</sup>ngyü which grows above ground, both the greens and the tuber are eaten. The latter called <sup>2</sup>ä-<sup>1</sup>k'ö is cut spirally into long strips and hung up to dry. It is fed to cattle in winter time when grass is scarce.

The entire <sup>1</sup>Na-<sup>2</sup>khi population is underfed and insufficiently clothed. Although water is plentiful, baths are unknown and only few, if any, wash their faces. Eye disease is most prevalent. As the village people possess no out-houses, intestinal parasites are universal especially ascarids and thread worms. Every summer, over 50 % of the population suffers from amoebic dysentery. Venereal disease and syphilis are common, also scabies and many different skin diseases due to uncleanness. Among horses and cattle, hoof and mouth disease is prevalent. There are neither doctors, dentists, hospitals or nurses in <sup>1</sup>Na-<sup>2</sup>khi land, except Chinese quack doctors and local herbalists. The <sup>1</sup>Na-<sup>2</sup>khi, themselves, believing that illness is caused by certain demons, call their village priest or <sup>2</sup>Dto-<sup>1</sup>mba to drive out the particular type of demon who caused the disease.

The life of the <sup>1</sup>Na-<sup>2</sup>khi peasants was indeed a hard one especially so during the days of their own rulers the Mu family 木氏. In order to gain prestige their rulers were eager to receive titles (mostly empty) from the Ming Emperors and those of the early Ch'ing dynasty. They used to supply funds for the upkeep of imperial tombs, for military campaigns in other provinces, in return for which they received buttons, while the peasants were taxed to capacity. The chiefs were given satin and occasionally a token gift of 20 taels of silver, gauze, socks, boots, while they themselves

contributed several thousand taels of silver to buy cavalry horses for imperial military service. Mu Sheng-pai 木生白 the best known of all <sup>1</sup>Na-<sup>2</sup>khi chiefs forwarded much silver to the imperial court for soldier's rations etc.; for these offerings he received empty titles and posthumous honors for his parents (see *ANKSWC*, pp. 125-131).

The <sup>1</sup>Na-<sup>2</sup>khi were mainly farmers, some, however, were artisans when not engaged in plowing their fields or in harvesting their crops. Their sons were shepherds on the snow range, herding mainly sheep and also yak. For lunch they eat dry flat unleavened wheat bread baked in hot ashes. Their land holdings being very small, the ordinary farmer leads a precarious existence, and should he have a crop failure, he would have to eat the following year's seed or go hungry. In the early spring, children are sent into the hills to collect the young shoots of the <sup>2</sup>Ndi-<sup>3</sup>li or bracken fern (*Pteridium aquilinum*) to tide them over. The <sup>1</sup>Na-<sup>2</sup>khi have the following saying about the <sup>2</sup>Ndi-<sup>3</sup>li: "When the young fronds of the bracken ferns appear, there is no fear of the children to die of hunger." Many of them could never enjoy the luxury of rice which was reserved for their chiefs and their relatives.

In their manuscripts they tell of using butter of yak and sheep for lamps while they were still in the grasslands and lived in yurts. After they were settled in their present home they used vegetable oils for lamps and resinous chips of pine wood served as fagots. These they stuck lighted into cracks of the walls of the houses to serve as light.

Sugar was very scarce as it was very expensive for it was made in the southern part of Yün-nan where the sugar cane grew. The sugar called sha-t'ang 沙糖 was brown and full of impurities.

Nearly every village had beehives, there was no dearth of flowers and the honey was delicious.

Their homes and clay stoves were without chimneys and the smoke from the wood fires found its exit in the many cracks of the walls and roofs.

The walls of the upper structure of their houses (mud bricks) did often not reach to the roof there being a space of one or two feet between the walls and the roofs. Often the hearth consisted of only three stones on which a large shallow iron pan rested.

They had no temples save one, built on Chinese lines where they enshrined their patron god <sup>2</sup>Ssan-<sup>2</sup>ddo. This temple was built by I-mou-hsun 異牟尋 king of Nan-chao between A. D. 784 and 785 during the T'ang dynasty and received the Chinese name of Pei-yo Miao 北嶽廟 = temple of the north sacred mountain, Pei-yo and <sup>2</sup>Ssan-<sup>2</sup>ddo being equivalent (see *ANKSWC*, pp. 191-200). Huge cypress trees within its compound

testify to the age of the temple as do stone memorial tablets in the temple courts. See Plate VII.

The pattern of <sup>1</sup>Na-<sup>2</sup>khi civilization precluded any monuments, such as palaces or tombs etc., for their religion was a type of nature worship. They worked within narrow limits of traditional patterns and followed purely utilitarian examples.

They were never near a center of culture. Chinese culture was a closed book to them, for the great majority could not read or speak Chinese. Another reason that kept them from acquiring Chinese culture was due to the attitude of the Chinese themselves who had little use, except contempt, for the aborigines. They left them to be governed by their own chiefs until 1723 when the <sup>1</sup>Na-<sup>2</sup>khi themselves petitioned the viceroy of Yün-nan to nationalize them and appoint Chinese magistrates to govern them.

They were isolated, but the greatest barrier was, however, erected by the <sup>1</sup>Na-<sup>2</sup>khi themselves, they kept more or less aloof because of the lower cultural standards of their neighbors except those to the south of them, the Min-chia. The Yangtze encircled their land like a moat and the snow range within the river's loop was their rallying point. Their land was impregnable except from the south, but the Yangtze loop formed a *cul-de-sac* and left no outlet.

There never had been an industrial opening of any kind. The rough mountainous topography discouraged especially Chinese contact. The Yangtze had no bridge until 1880 when an 18 iron chain bridge was constructed, then the only one in the river's 2,000 mile course (see *ANKSWC*, p. 246, Plates 110, 111). The river everywhere offered formidable obstacles to such contact.

Their civilization was self sufficient; their only meeting in the early days was with the <sup>3</sup>P'u.

The <sup>1</sup>Na-<sup>2</sup>khi had no measurements or weights, none is mentioned in their manuscripts except one, the <sup>1</sup>lu a measurement which comprised the distance from the tip of the outstretched hand to the center of the chest.

Mirrors are mentioned but as the name <sup>1</sup>mi-<sup>2</sup>lv implies were introduced from Tibet (melong); a stone was used for the purpose.

Metal industry was practically non-existent, their manuscripts relate that they obtained iron pans from the <sup>2</sup>Boa; they also attributed a supernatural origin to their swords and sickles which would indicate that they did not make any themselves, yet they mention files, awles, copper pots and axes.

In ancient times they were proud warriors and had a knowlegde of forg-



ing weapons. There exists a manuscript called <sup>2</sup>Ndzër-<sup>1</sup>ssu <sup>2</sup>t'u or the origin of the weapons. In this manuscript, chanted at the <sup>1</sup>D'a <sup>3</sup>Nv funeral ceremony performed for a warrior the various weapons employed in warfare are mentioned (see *DNFCONKW*). All manner of weapons are described therein but firearms are not mentioned which would indicate the great age of the ceremony as well as of the book.

Warriors wore a blade armor, lacquered red sometimes with gold designs on the red background. It reached to the knees and was very heavy. The shoulders were protected by pouldrons of the same material, they were not actually sleeves but were tied below the arm. See Plate VIII. The captains of the Nan-chao army to which also the <sup>1</sup>Na-<sup>2</sup>khi belonged for they were the sixth member of the Liu-chao 六詔 later called Nan-chao 南詔 used cuirasses made of rhinoceros hide called hsi-p'i 犀皮. Under this armor which the <sup>1</sup>Na-<sup>2</sup>khi called <sup>1</sup>ng'a-<sup>2</sup>gyi they wore a sleeveless armor-shirt which they called <sup>1</sup>ng'a, of this no specimens are extant. As head protection they donned an iron helmet similar to those worn by the Mongols of Gengis Khan's time; it was composed of eighteen iron segments, nine inner and nine outer which overlapped; they were tied on the top and bottom with leather thongs. The <sup>1</sup>Na-<sup>2</sup>khi called them <sup>2</sup>mun-<sup>1</sup>gko. As weapons they had long and short swords very different from the Tibetan swords in fact they were unique. The long sword was called <sup>1</sup>ng'a and the short one <sup>2</sup>zhër. The first one was carried on a long leather strap suspended from the shoulder and decorated with bits of white shell. The second was stuck in a girdle around the waist like the Tibetans carry their long swords (see *DNFCONKW*, p. 29).

To ward off spear thrusts they carried circular shields made of a hard bamboo, this shield is figured in <sup>1</sup>Na-<sup>2</sup>khi manuscripts where it is called <sup>2</sup>boa-<sup>1</sup>p'u, but no specimens are extant. Actual weapons were bows and arrows or <sup>2</sup>llü-<sup>1</sup>ssī the latter were carried in a quiver called <sup>2</sup>llü-<sup>2</sup>bpü, the bow or <sup>2</sup>llü-<sup>2</sup>mä was made of yak horn and rested in a tiger skin quiver called <sup>2</sup>llü-<sup>1</sup>gyi = arrow house. The heads of the arrows were of iron and were termed <sup>2</sup>ssan-<sup>1</sup>mb'a. To protect the forearm when fighting with swords, they wore an armband known as <sup>1</sup>la-<sup>3</sup>bpa, but as a protection of the thumb when shooting off arrows they wore a thumb ring made of yak horn called <sup>3</sup>dta-<sup>2</sup>mä. Sickles are elongated and serrated and are known as <sup>1</sup>ndaw. It is an instrument mainly used to harvest crops, but was also wielded in fighting and some of their <sup>2</sup>Yu-<sup>1</sup>ma or protecting spirits are figured with them. They had whetstones called <sup>2</sup>ssi-<sup>1</sup>lv to sharpen their arms on. One other weapon was the <sup>3</sup>gko-<sup>1</sup>dshi-<sup>2</sup>boa-<sup>3</sup>p'u made of iron and as the first syllables indicate resembled large eagles' claws; the blade was of iron,

socketed and fastened to a wooden staff with a scarf tied to it at the junction. The warriors used it to strike at a man's chest to tear out his heart. No firearms of any kind are mentioned nor is gun powder. Warriors often wore tiger skins which enhanced their prowess and struck terror to the hearts of the enemies. The crossbow which they call <sup>1</sup>dta-<sup>2</sup>naŋ was never in use by the <sup>1</sup>Na-<sup>2</sup>khi and no symbol exists for it in their written language. It is however in use by the Li-su of the Salwin valley. With the <sup>2</sup>ddv-<sup>1</sup>p'ěr or white conch-shell (*Turbinella pyrum*) they called their warriors to combat.

There can be no mention of <sup>1</sup>Na-<sup>2</sup>khi archeology. There are no tombs, mounds or middens, for the <sup>1</sup>Na-<sup>2</sup>khi never buried their dead but cremated them, thus no objects were placed with their dead as the Chinese practiced during the Han and later dynasties. No utensils or other objects could have been preserved which would give us a cross section of the belongings of the <sup>1</sup>Na-<sup>2</sup>khi.

The <sup>1</sup>Na-<sup>2</sup>khi never built temples, there being only one in the Li-chiang district that dates back to over one thousand years, and that is the Pei-yo Miao 北嶽廟 at <sup>1</sup>Dü-<sup>2</sup>gkv, the Chinese Yü-lung ts'un 玉龍村. Later in the Ming dynasty about 1627 Karma-pa (red sect) Lamaseries were established throughout the region and also Chinese Buddhist and Taoist temples, but in <sup>2</sup>Bbër-<sup>2</sup>ddër the Chinese Pei-ti 北地 in the Chung-tien magistracy where the <sup>1</sup>Na-<sup>2</sup>khi lived uncontaminated by Chinese or other tribes except Tibetans, their northern neighbors, neither graves nor temples of any kind are to be found. Yet there, the <sup>1</sup>Na-<sup>2</sup>khi have very few manuscripts left due to the invasion of Tibetan bandits who burned <sup>1</sup>Na-<sup>2</sup>khi villages and with them their old <sup>1</sup>Na-<sup>2</sup>khi manuscripts.

There are no ancient stelae in <sup>1</sup>Na-<sup>2</sup>khi land except such as were erected by the former rulers dating back to the Ming dynasty, and a stone drum in Shih-ku 石鼓 erected by Chu-ko Liang 諸葛亮 about A. D. 220 but the Chinese characters on both sides of the drum were incised by a <sup>1</sup>Na-<sup>2</sup>khi ruler Mu Kao 木高 (A. D. 1548-1561) recording the exploits of the <sup>1</sup>Na-<sup>2</sup>khi who fought with Chinese against Tibetans.

Another ancient remnant is a small <sup>3</sup>t'a or pagoda which was erected by the soldiers of Kublai Khan on the Yangtze at the village of <sup>2</sup>A-<sup>2</sup>wüa or A-wa ts'un 阿瓦村, near Chü-tien 巨甸, where he was encamped before crossing that river on his Burma expedition in A. D. 1277. The <sup>3</sup>t'a stands but the original Mongol characters time has effaced.

Back of the village of <sup>2</sup>Nv-<sup>2</sup>lv-<sup>2</sup>k'ö or Hsüeh-sung-t'sun 雪嵩村, on a cliff at the foot of the snow range there is a large inscription by the first Chinese magistrate Yang Pi commemorating the nationalization of <sup>1</sup>Na-

<sup>2</sup>khi land. The large inscription has reference to the Jade dragon mountain which is here referred to as the jade pillar which supports or upholds Heaven. The place is called <sup>1</sup>Gkwua-<sup>1</sup>gyi-<sup>2</sup>gkv-<sup>1</sup>lv-<sup>1</sup>'a-<sup>2</sup>gko. The first magistrate was apparently a Manchu as he hailed from Mukden (see *ANKSWC*, pp. 147-149).

As to the number of <sup>1</sup>Na-<sup>2</sup>khi inhabitants in the district of Li-chiang, the census of the 22nd year of the Republic (1933) gave the following figures: Li-chiang district registered 28,375 households; these comprised 68,216 males, and 64,366 females, or total of 132, 582 souls. Of these again, 5,340 of the men were literate, that is they could read and possibly write Chinese. Of the women only 170 were literate.

### EDUCATION

Although the <sup>1</sup>Na-<sup>2</sup>khi had two types of writing a pictographic and a phonetic only the <sup>2</sup>Dto-<sup>1</sup>mbas or priests could read. As it was a mnemonic type fewer and fewer of the priests could read as time went on. The younger generation of <sup>2</sup>Dto-<sup>1</sup>mba either had never learned what had to be supplied from memory, or had forgotten altogether. As to the Chinese language, in ancient days there were no schools where Chinese was taught. Furthermore the peasants had little leisure time to study; and the children, they also had to work and help their parents, especially the girls whose education was usually entirely neglected. Later the government established schools only in the town of Li-chiang and in villages in the suburbs. In the villages farther away the peasants hired their own teachers who conducted primary schools in old temples in lieu of schoolhouses.

This accounts for the great illiteracy among the peasants. Although in later years the provincial government established a so-called teachers college, with Chinese teachers from outside the province, the schools had to be abandoned for lack of funds. As once an Hong Kong-educated Yün-nan official told me - he was secretary to the Commissioner of foreign affairs in K'un-ming - we are paying taxes to produce bandits.

It can thus be seen that there is little to be said of education in <sup>1</sup>Na-<sup>2</sup>khi land, and this holds good for less cultured tribes living still further to the west in the province.

## HOUSE AND FURNITURE

In ancient days <sup>1</sup>Na-<sup>2</sup>khi houses were very simply constructed. The walls were of tamped earth, and divisions of rooms were of braided bamboo mats covered with yellow clay, such partitions were called <sup>3</sup>mùen-<sup>1</sup>här-<sup>2</sup>gya-<sup>1</sup>aw in the literary language and <sup>2</sup>p'iu-<sup>2</sup>p'iu colloquially. The hearth or cooking place was over three feet high and was called <sup>1</sup>gkwua and was surrounded on three sides by beds of the same height. Only old men and young men could sleep around the hearth. Young women with children were not allowed to step or sleep on these beds. No one could cross from the upper bed to the side bed for he would have to step over the place reserved for the <sup>3</sup>Ssu, Life god. In the center of the hearth were three rocks where the cooking was done. Whenever anyone drank tea he first poured a little on the three rocks calling out <sup>3</sup>ch'ung = offering to the spirits of the ancestors and to the <sup>3</sup>Ssu or Life god. On the north side and above the hearth on a shelf was the shrine for the <sup>3</sup>Ssu <sup>1</sup>dtv, the basket in which the Life god resided, also the <sup>3</sup>Non <sup>1</sup>dtv, a basket containing the 18 <sup>3</sup>Non rocks which represented the spirits who protect the domestic animals. On the south of the hearth there was no sleeping place and it was there that the <sup>1</sup>Mùan <sup>2</sup>dtv resting on a rock rose from the floor. It was a quadrangular post, it was Heaven's prop, and represented the four-sided <sup>1</sup>Ngyu-<sup>3</sup>na <sup>3</sup>Shi-<sup>2</sup>lo <sup>1</sup>Ngyu or Mount Sumeru (Kailas). In front of it was a shelf on which incense was burnt. To this post were tied the two oak and juniper treelets from the altar of the <sup>2</sup>Mùan <sup>1</sup>bpö <sup>1</sup>d'a.

After the marriage ceremony before the <sup>2</sup>Mùan <sup>2</sup>dtv the <sup>2</sup>Dto-<sup>1</sup>mba touched the foreheads of the new couple with butter placed on the end of a <sup>3</sup>k'o-<sup>1</sup>byu and at the same time daubed the rock on which the <sup>2</sup>Mùan <sup>2</sup>dtv rests with butter (see *MBC*, p. 91, note 227).

The court of the house was called <sup>2</sup>gyi-<sup>2</sup>gkan, and outside of the house were the grain racks or <sup>2</sup>Boa-<sup>2</sup>mun-<sup>2</sup>la-<sup>1</sup>shër-<sup>3</sup>gko the rack with the long arms; <sup>2</sup>boa-<sup>2</sup>mun was also a term for a home. See Plate IX. Otherwise the <sup>1</sup>Na-<sup>2</sup>khi homes were similar to those of the Chinese. The stables for the oxen, horses and pigs were on the left of the court and of the entrance. Accumulated manure from the pens was placed on the fields; <sup>1</sup>Na-<sup>2</sup>khi never employed night soil as fertilizer.

## MARRIAGE AND DEATH

In former days there appears to have existed free love in <sup>1</sup>Na-<sup>2</sup>khi land; one would surmise this from the many love pacts which ended in suicide. The ruling family of the <sup>1</sup>Na-<sup>2</sup>khi alone seems to have contracted betrothal and marriages in Chinese style. Ever since the <sup>1</sup>Na-<sup>2</sup>khi were nationalized and Chinese officials took charge of the government in A. D. 1723, some of the customs of the <sup>1</sup>Na-<sup>2</sup>khi were altered.

The two most important were marriage and burial customs. The first was most obnoxious to the <sup>1</sup>Na-<sup>2</sup>khi who used to mate with whomsoever they fell in love with and liked. After 1723 children were spoken for and betrothals were arranged by go-betweens whom the <sup>1</sup>Na-<sup>2</sup>khi called <sup>2</sup>mi-<sup>2</sup>la-<sup>1</sup>mbu. They considered the crane who flew high among the clouds the <sup>2</sup>mi-<sup>2</sup>la-<sup>1</sup>mbu between Heaven and Earth; the juniper (incense) between the worshiper and the gods; the morning and evening stars the <sup>2</sup>mi-<sup>2</sup>la-<sup>1</sup>mbu between the sun and the moon. This does not mean that the <sup>1</sup>Na-<sup>2</sup>khi had no marriage ceremony; an elaborate ceremony called <sup>3</sup>Ssu <sup>3</sup>dsu = to meet the Life god, also called <sup>3</sup>Ssu <sup>1</sup>k'v = to invite the Life god was performed. Before a couple was married a new <sup>3</sup>Ssu-<sup>1</sup>dtv or basket for the new Life god had to be prepared; every new family had to have its own Life god. The new <sup>3</sup>Ssu-<sup>1</sup>dtv was placed on a table before which a couple was married (see *NNCRC*, pp. 250-251; pp. 146-147, note 150). At the marriage the <sup>2</sup>Dto-<sup>1</sup>mba tied the <sup>3</sup>Ssu-<sup>1</sup>bbër, the string of the Life god, to a man and his bride, this <sup>1</sup>bbër or string was also tied to <sup>3</sup>T'a-<sup>2</sup>la-<sup>2</sup>zo-<sup>2</sup>mun the god of the hearth. It was also called the <sup>3</sup>Ssu-<sup>1</sup>bbër <sup>1</sup>gko-<sup>1</sup>bbër the Life god rope love rope (see *NNCRC*, p. 376, notes 758, 759). Occasionally brides would rent Chinese embroidered garments for the occasion in which they appeared ill at ease.

There were hardly any <sup>2</sup>Dto-<sup>1</sup>mbas left in 1930 who could explain the texts of the manuscripts which pertained to the <sup>3</sup>Ssu<sup>3</sup>dsu or marriage ceremony. Monogamy was not exclusively practiced, for a <sup>1</sup>Na-<sup>2</sup>khi could take another wife if the first one produced no offspring, but the second wife seemed to have had the same standing as the first. Nowadays couples are married before a magistrate or a Taoist (Chinese) priest. The <sup>1</sup>Na-<sup>2</sup>khi being really unreligious were not particular who married them.

Since the adoption of child-betrothal much unhappiness has come to the <sup>1</sup>Na-<sup>2</sup>khi resulting usually in suicide. Among the Li-chiang <sup>1</sup>Na-<sup>2</sup>khi who live nearer the center of Chinese jurisdiction the Chinese system of child-betrothal has been stricter adhered to than by those living in re-

more places in the mountains, and it is in the former region that suicide is common.

The <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Dto-<sup>1</sup>m̄ba perform an elaborate ceremony called <sup>2</sup>Hār <sup>2</sup>la-<sup>1</sup>llü <sup>3</sup>k'ö for the propitiation of suicides. Formerly this ceremony seems to have been performed for persons who have died an accidental or violent death or on the battlefield. It was to accomplish the dispatch of the souls of such persons to their ancestors. See Plate X.

Every <sup>1</sup>Na-<sup>2</sup>khi about to die is carefully watched so that his last breath should not pass unnoticed. In the case of a man nine grains of rice and a little silver and in that of a woman seven grains of rice and a little silver are kept in readiness. As soon as the person is about to expire the necessary number of grains and silver are placed under the tongue. Anyone who dies without this having been done cannot be escorted to the realm of his ancestors and automatically becomes a roving wind demon.

At the <sup>2</sup>Hār <sup>2</sup>la-<sup>1</sup>llü <sup>3</sup>k'ö ceremony a live chicken takes the place of the suicide and at the appropriate moment it is hanged or smothered by flour pushed down its throat but not before the requisite grains of rice and silver have been inserted in its bill. The last breath of the person who died unattended is thus exchanged for that of the chicken. This is called <sup>2</sup>A-<sup>1</sup>na <sup>3</sup>ssaw <sup>2</sup>lä-<sup>3</sup>k'ö meaning chicken black breath again place.

Unmarried women are more prone to commit suicide either alone or with their lover than men, for the life of a woman was a hard one; it was one of labor and bearing children.

There are two manuscripts chanted among a great many during the <sup>2</sup>Hār <sup>2</sup>la-<sup>1</sup>llü <sup>3</sup>k'ö ceremony in which the after life of a love-suicide is painted in the most rosy colors. Suicide becomes thus a great inducement. They are told that they will remain forever young and united with their lover, they will roam in the eternal embrace of love, they will roam with the wind, there will be no more death nor rebirth, but life eternal in perpetual youth and happiness. I fully described the whole ceremony with a translation of the two key books called <sup>2</sup>Lv-<sup>2</sup>m̄bēr <sup>2</sup>lv-<sup>1</sup>zaw <sup>3</sup>ssaw in *RKMGMG*, pp. 1-152 with 32 Plates, where the motives and methods of suicide are fully explained.

The most common method was by hanging, but when opium was cheap, the parties would swallow raw opium; another method was by boiling the root of the aconite and drinking the oil. There was hardly a family in the Li-chiang district where someone had not committed suicide.

Disposal of the dead among the <sup>1</sup>Na-<sup>2</sup>khi was by cremation. Only since the advent of the Chinese in 1723 are the dead buried. However, women dying in childbirth, or a hundred days before or after the giving birth to a child, are still cremated as they are considered unclean.

Elaborate funeral ceremonies exist depending on whether the deceased was a priest, an old man, the wife of a priest or an old woman. A special ceremony was also performed for a courageous warrior or a courageous woman. All these ceremonies are enumerated – there being sixteen – and <sup>2</sup>Zhi <sup>3</sup>mā, the one performed for everyone, young or old, is described in detail with translation of the manuscripts pertaining to them (see *ZMFCN-SWC*, pp. 1–228; 10 Plates; *DNFCONKW*, pp. 1–30; 5 Plates).

With very small children there are no formalities whatever, they are simply carried out without the use of a coffin and are buried anywhere. When they cremated their dead a rule was followed which prescribed the number of logs that were to be used, for a man 9–10 logs, for a woman 7–8 logs, for suicides 5–6 logs, for a boy 3–4 logs and for a girl or child 2–3 logs.

Within three years after the death of a person an elaborate funerary rite called <sup>2</sup>Khi <sup>3</sup>Nv was performed, usually by a whole village, when the bones of the cremated bodies were collected, put into a small bag, parts of the skull down to the feet and deposited in caves, or interred on a mound as at <sup>2</sup>La-<sup>1</sup>lo-<sup>3</sup>dto-<sup>1</sup>gko north of Li-chiang.

#### THE STATUS OF WOMAN

Up to the arrival of the Communists the standing of <sup>1</sup>Na-<sup>2</sup>khi women was quite low, she could be sold by her parents to anyone in marriage, she had nothing to say. Furthermore she could not inherit anything either from her parents or her husband. If she was a childless widow, or had no son, her relatives could sell her to anyone who wanted to marry her. She could only remain in the home of her husband with the consent of his relatives. If she had a son he inherited the home and fields and she could remain with her son, but the house did not belong to her. There was, however, a close bond between sons and mothers.

Her lot was a very hard one, she performed everything except the plowing of the fields and even in that she assisted by leading the oxen, while a child sat on the plow shaft to hold it down.

The women are regular amazons with rosy cheeks possessing the strength of a mule. They are of average height and dress better than the men. They transact all the business, do the buying and selling, while the men take care of the babies and smoke long pipes. The women brew the liquor, weave and sew their clothes. They are much more aggressive than the men and will waylay men and bar their road. They have a sense of humor as do also

the men. The latter are usually tall, well built and sparsely hairy. Their skin is darker than that of the Chinese, a deep brown. Their Mongoloid eyes are dark brown and their black straight glossy hair is often tinged a reddish brown.

There was no schooling for girls as they were the helpers in the home, hence the large numbers of illiterates among the female population. In 1933 only 170 women could read out of 132,582. When the Communists came all this was changed. The first declaration was about the emancipation of the women. Every woman was declared the equal of any man. Every woman under 35 was required to become a soldier. They were given guns, or if there were not enough to go around, sticks, and they drilled most of the day. They marched to the tune of „John Brown's body lies a-mouldering in the grave". Their husbands were cowed and did not dare open their mouths. It was with the emancipated women that Communists made one of the greatest headways. The same holds good of the younger generation of the various tribes. The Chinese always looked down on tribes people and called them by derogatory names as Yi-jen 夷人 or barbarians, or Fan-tzu 番子 and Man-tzu 蠻子 which has the same meaning. When writing their tribal names like Lo-lo 羅羅 they delighted to put the dog radical before the phonetic to show their contempt for them. The Reds emancipated also the tribal population of China and declared them the equal of any Chinese, thereby enrolling them as enthusiastic supporters in the beginning. The picture changed however when all land deeds were gathered and burned and all land was apportioned according to the number of persons in a family. No new deeds were issued. This was a great shock to the more affluent, if that word can be applied to the peasants of Li-chiang who practically lived from hand to mouth, but was a boon to those who had little or next to nothing.

#### DRESS OF THE WOMEN

Most tribes can easily be distinguished by the dress of their women. A certain type of dress and coiffure was prescribed for unmarried and married women; the hairdress was the distinguishing mark between the married and unmarried women. All females wore trousers to the ankles, either of cotton or homespun. Over the ankles they wore tight fitting puttees of usually a dark blue color. Each article of clothing had its particular name: <sup>1</sup>La-<sup>3</sup>shi-<sup>2</sup>dso is the name of the head-cloth married women cover their



hair with (see Plate XI); the main garment which covers the chest and back and extends down to the calves is called <sup>2</sup>ba-<sup>1</sup>la; over the latter is worn the <sup>2</sup>k'an-<sup>1</sup>djan a jacket which extends in the rear over the <sup>2</sup>gkan-<sup>1</sup>dtaw and is the apron which is worn in front; the trousers are called <sup>2</sup>lä. Over the <sup>2</sup>yu-<sup>1</sup>ghugh a sheepskin is worn, sometimes it is a well tanned goat skin with long gray hair, this is tied crosswise in front with two white bands. On the back of the sheep or goatskin (hair inside) just below the shoulders are worn seven embroidered disks called the <sup>3</sup>bpa-<sup>2</sup>zo or <sup>2</sup>ma-<sup>2</sup>gkyi which represent the seven stars of *Ursa major*. Above each shoulder they wore (now rarely) a larger embroidered disk called <sup>2</sup>ssi-<sup>3</sup>bpa they represented the sun and moon. Both the small and large disks were collectively called <sup>3</sup>ma-<sup>2</sup>yü-<sup>3</sup>bpa. Formerly <sup>1</sup>Na-<sup>2</sup>khi women wore a wide pleated skirt which reached below the knees. It was of white hemp cloth and was known as the <sup>2</sup>Nv-<sup>1</sup>p'ër-<sup>2</sup>lä-<sup>1</sup>gyi. The pleats are called <sup>2</sup>lä-<sup>1</sup>gyi which is also the term for a ladder or notched log; <sup>2</sup>nv-<sup>1</sup>p'ër stands for silvery white. Colloquially this type of skirt is called <sup>1</sup>t'ër.

The shoes, made by the <sup>1</sup>Na-<sup>2</sup>khi, are of cowhide as are the soles fastened with iron nails with large broad flat heads. They only knew low shoes, left and right foot were exactly the same, no socks or stocking were worn. Women sometimes wore cloth shoes of Chinese style with leather soles.

The <sup>1</sup>Na-<sup>2</sup>khi women were the sellers and buyers on the markets, and carried on their back when going to market a basket woven of bamboo and decorated with black sheep wool. See Plate 11. In olden days the braids of unmarried girls were tied around the head cloth instead of underneath it.

At funerals girls wore a long white cotton band around their head, it was wound evenly to a thickness of 2 or 3 inches.

Sons, at the funeral of their father wore a head covering called <sup>2</sup>p'ö-<sup>2</sup>lü, it resembled a turban but covered the top of the head like a cap. Grand children, at the funeral of their grandparents wore a hat called <sup>2</sup>la-<sup>1</sup>ssaw-<sup>2</sup>p'ö-<sup>2</sup>lü; it was braided of split cane-brake, a small bamboo of the genus *Arundinaria*, and had ravelled edges = <sup>2</sup>la-<sup>1</sup>ssaw. It was intended to look ugly. Another type of hat worn by mourners was made of black goat's hair and was called <sup>3</sup>ds'i-<sup>2</sup>bpa-<sup>1</sup>na; if made of black yak hair it was known as <sup>1</sup>mbër-<sup>2</sup>ssu <sup>3</sup>ds'i-<sup>2</sup>bpa<sup>2</sup>gu-<sup>1</sup>mun. The headgear for women at funerals was called <sup>2</sup>de-<sup>1</sup>gkyi <sup>1</sup>p'ër <sup>2</sup>mä <sup>2</sup>t'an and was of white hemp cloth.

Married women had a peculiar coiffure; the hair of the rear part of the head was brought forward to meet the front part, both were tied on the top of the head, the front part with a stiff strip of felt called the <sup>2</sup>gkv-<sup>1</sup>ghugh and another stiff strip of felt or several layers of cotton or hemp cloth was tied around the hair from the back part of the head, this was called <sup>1</sup>bä-

<sup>3</sup>dtā. Over both of these strips, which held the hair in place, was worn the <sup>2</sup>gkv-<sup>2</sup>dzi and over this was placed the <sup>2</sup>mbe-<sup>1</sup>gyi also a head cloth (see *ANKEED*).

The <sup>1</sup>Na-<sup>2</sup>khi women used two types of combs, a coarse one called <sup>3</sup>bbēr and a fine double-toothed comb called <sup>3</sup>bbēr-<sup>1</sup>dzi; the first named was used for combing the hair and the second for catching lice.

There were no facilities of bathing and even if there had been they never would have taken a bath; they washed their faces but only superficially, although I have seen some of the more good looking girls with clean faces and rosy cheeks.

On festive occasions they disported jewelry, earrings and clasps which fastened their garments in front. Many wore silver or jade bracelets on both arms and around their heads strings of carnelian. When they went visiting they always carried a handkerchief in their left hand.

## RELIGION


As has already been remarked the <sup>1</sup>Na-<sup>2</sup>khi are unreligious but not irreligious. A good deal of superstition prevailed similar to that of the Chinese. Horoscopes were cast for all possible undertakings, lucky and unlucky days had to be ascertained, as for example if it was propitious for a bride to leave her home and what day was auspicious to enter the home of the groom; if that day was a lucky one for her to leave her parent's home but an unlucky one for her to enter the home of the groom, then her relatives built a small shed of boards and brushwood on the road opposite her groom's house, and there she would spend the day and following night or as long as necessary until the arrival of the lucky day when she could enter her groom's residence.

From time immemorial they seem to have been shamanists except perhaps when they lived in the grasslands where they propitiated Heaven and later Earth (see *MBC*). The <sup>2</sup>Dto-<sup>1</sup>mha or priest directed for a thousand years or more the life of the <sup>1</sup>Na-<sup>2</sup>khi. Each village had one or more <sup>2</sup>Dto-<sup>1</sup>mbas.

The <sup>2</sup>Dto-<sup>1</sup>mha in ancient days wore large felt hats or in absence of the former large hats braided from bamboo; these hats had large brims. When exorcising demons they used the <sup>2</sup>bā-<sup>2</sup>k'ō an irregularly forked iron structure such as the Bön priests wore (see *QGTBR*, Plate 10). At all ceremonies, except at <sup>2</sup>Mùān <sup>1</sup>bpō, they wore the five-lobed crown called <sup>3</sup>k'ō. Their

dress consisted of one long dark blue garment with sleeves. In ancient times they wore large, wide trousers called <sup>2</sup>p'u-<sup>2</sup>ssi <sup>2</sup>lä-<sup>1</sup>p'er of coarse white crepe silk; peasants used also such trousers but made of hemp. The <sup>2</sup>Dto-<sup>1</sup>mbas relate that in ancient times lamas used to wear crepe-silk trousers but later discarded them and gave them to the Bön-po (<sup>2</sup>Dto-<sup>1</sup>mba <sup>3</sup>Shi-<sup>2</sup>lo [gShen-rab(s)],) and since that day the lamas are trouserless. They also discarded the sleeves of their garments and likewise gave them to <sup>2</sup>Dto-<sup>1</sup>mba <sup>3</sup>Shi-<sup>2</sup>lo the founder of the <sup>1</sup>Na-<sup>2</sup>khi Bön.

The garments worn by the lamas in ancient times the <sup>1</sup>Na-<sup>2</sup>khi called <sup>2</sup>gyi-<sup>2</sup>szī-gko-<sup>1</sup>ts'u. This garment had sleeves. The name occurs in *ms.* <sup>3</sup>Shi-<sup>2</sup>lo <sup>2</sup>t'u-<sup>3</sup>bbüe = the origin of gShen-rab(s) or <sup>3</sup>Shi-<sup>2</sup>lo. The meaning of the garment's name is garment beautiful needle fine, it is to lay emphasis on the beauty of the garment because it was sewn with a fine and not a coarse needle.

When evicting demons they fight sham battles with them, that is the <sup>2</sup>Dto-<sup>1</sup>mbas paired and danced, gyrating and slashing the air with their swords, holding in one hand the <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>ds-<sup>1</sup>lēr the typical Bön gong called shang . Other religious implements were the <sup>2</sup>bpö-<sup>1</sup>mba (Amṛta vase), a long black feather of the <sup>1</sup>Khyu-<sup>3</sup>gu <sup>3</sup>gko-<sup>1</sup>na the black vulture of the grasslands was stuck in its mouth; nowadays they substitute tail feathers of other predaceous birds.

The <sup>3</sup>Llü-<sup>1</sup>bu wound a red cloth around their head in which they stuck small flags and larger flags, often perforated, in the girdle but on their back.

There were no ceremonies at the birth of children, but for the increase of flocks the <sup>3</sup>Non <sup>1</sup>ddü <sup>1</sup>bbü ceremony was performed. The <sup>2</sup>Llü-<sup>2</sup>mun or Nāgas were propitiated as described in *NNCRC*. Purification rites were enacted as <sup>3</sup>Ch'ou <sup>1</sup>na <sup>1</sup>gv the largest of them all. A black goat or black cow was lead around the area to be purified as was the custom in India as told in the *Garuḍa Puranam* by Manmatha Nath Dutt, Calcutta, 1908; chapt. XCVII, p. 281. The <sup>1</sup>Na-<sup>2</sup>khi could not explain why this was done, but in the above *Puranam* we read that the shadow of the goat or ox purified the land (see *NNCRC*, pp. 628, 742).



To purify of <sup>3</sup>ch'ou the land, house and heaven above them by circumambulating the area with a black goat. This was practiced by the <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Dto-<sup>1</sup>mba in former days. The black spot on the goat's body indicates that a black goat is meant. A man is leading the goat, beneath him is the symbol read <sup>3</sup>khü-<sup>2</sup>khü = to circumambulate, below is the symbol <sup>1</sup>dü = earth, land; next is <sup>1</sup>gyi = house; the top symbol is <sup>2</sup>muan = heaven, below it <sup>3</sup>ch'ou = unclean, impure. See *Hs. or.* 1388, p. 8a, rubr. 9.



To purify of <sup>3</sup>ch'ou the land, mountain, valley and the sky or heaven above by circumambulating the area with a black ox. A man is leading a black ox, below him is the symbol <sup>3</sup>khü-<sup>2</sup>khü = to circumambulate; beneath the latter is the symbol for land,

<sup>1</sup>dü, followed by <sup>1</sup>ngyu = mountain and <sup>1</sup>lo = valley. Above all is the symbol <sup>2</sup>muan = heaven and below are <sup>3</sup>ch'ou and <sup>3</sup>khü-<sup>2</sup>khü. See Hs. or. 1388, p. 9b, rubr. 10.

The <sup>1</sup>Na-<sup>2</sup>khi priests performed sixteen different funeral ceremonies as described in *ZMFCNKSWC q. v.* In the last part of the second volume of the *<sup>1</sup>Na-<sup>2</sup>khi-English Encyclopedic Dictionary* all the different ceremonies are more or less briefly described so there is no need to recount them here again.

For the performing of religious ceremonies the <sup>1</sup>Na-<sup>2</sup>khi employed a <sup>2</sup>Dto-<sup>1</sup>mba or priest, derived from the Tibetan *tön-pa* རྩོམ་པ། = promulgator of a doctrine, teacher. For shamanistic performances as calling the spirits, and communicating with the souls of deceased, the <sup>2</sup>Llü-<sup>1</sup>bu was paramount. His office heralds from the dim past and is enshrouded in mystery. The <sup>2</sup>Llü-<sup>1</sup>bu, who were formerly women, could not read the <sup>1</sup>Na-<sup>2</sup>khi script and were ignorant of ceremonies enacted by the <sup>2</sup>Dto-<sup>1</sup>mba. They had nothing in common with the <sup>2</sup>Dto-<sup>1</sup>mba (see *CSTCB*, pp. 796-801), yet were at times present at certain ceremonies.

The founder of the <sup>1</sup>Na-<sup>2</sup>khi religion was, according to their manuscripts, <sup>2</sup>Dto-<sup>1</sup>mba <sup>3</sup>Shi-<sup>2</sup>lo-<sup>2</sup>mi-<sup>3</sup>wu who is identical with *sTon-pa gShen-rab(s)-mi-bo* of the Bön religion. According to tradition he came from Western Tibet for certain texts speak of him as having gone to <sup>2</sup>Ö-<sup>2</sup>dso <sup>1</sup>dü or <sup>2</sup>Bpa-<sup>1</sup>lér-<sup>2</sup>ö-<sup>2</sup>dso <sup>1</sup>dü to teach; in *gZer-myig*, vol. 20b, line 5 we read [gShen-rab(s)]: "He went into the land of men to teach. On his way he came into the land of Bar-lha-od-gsal". According to <sup>1</sup>Na-<sup>2</sup>khi oral tradition <sup>2</sup>Dto-<sup>1</sup>mba <sup>3</sup>Shi-<sup>2</sup>lo was born in <sup>1</sup>Ö-<sup>2</sup>mun-<sup>1</sup>lo-<sup>3</sup>li <sup>1</sup>dü which is the Tibetan *Ol-mo-lung-rings* འོ་མོ་ལུང་རིང་སྤོང་།.

The office of priest is inherited from father to son, and at the funeral of a <sup>2</sup>Dto-<sup>1</sup>mba the ceremonial objects like swords, conch, <sup>2</sup>ds-<sup>1</sup>lér, Amrta vase, funeral wand, his <sup>3</sup>k'o and clothing are given to the son while <sup>2</sup>non-<sup>1</sup>ö <sup>3</sup>ssaw = to invite the objects is chanted.

As remuneration for the performance of ceremonies the priest was given food, wine, and besides the animals killed and offered to the gods or demons, one or two Yün-nan silver dollars the equivalent of 50 cents. If chickens were offered the gods or demons received the wings or claws, if goats, sheep

or cows were offered the gods received the head or legs of the animals. For the various objects used as paper flags or objects which had to be bought the <sup>2</sup>Dto-<sup>1</sup>mba received a small amount to cover his expenditures; trees, <sup>3</sup>k'o-<sup>1</sup>byu, <sup>2</sup>dto-<sup>2</sup>ma he supplied himself.

### DEITIES

The <sup>1</sup>Na-<sup>2</sup>khi have many great gods, gods, but few goddesses, though many spirits, mountain gods and over 500 demons. See Plate XII.

Their two main gods are <sup>2</sup>Ö-<sup>1</sup>gko-<sup>2</sup>aw-<sup>1</sup>gko and <sup>1</sup>Ssaw-<sup>2</sup>yi-<sup>2</sup>wüa-<sup>2</sup>de. The first is represented by the Tibetan letter <sup>5</sup>Ñ; no pictorial representation exists of him except on the <sup>1</sup>Hä <sup>2</sup>zhi <sup>1</sup>p'i, but his name is not spelled out phonetically. <sup>1</sup>Ssaw-<sup>2</sup>yi-<sup>2</sup>wüa-<sup>2</sup>de is always represented in the texts by two symbols and he is furthermore figured on their paintings. It seems that he existed first in the sense that he meditated on Ö and <sup>2</sup>Ö-<sup>1</sup>gko-<sup>2</sup>aw-<sup>1</sup>gko became a reality. <sup>1</sup>Ssaw-<sup>2</sup>yi-<sup>2</sup>wüa-<sup>2</sup>de's parents are figured, especially on the funeral scroll <sup>1</sup>Hä <sup>2</sup>zhi <sup>1</sup>p'i and so are those of <sup>2</sup>Ö-<sup>1</sup>gko-<sup>2</sup>aw-<sup>1</sup>gko. It is difficult to conclude who of the two is the first, but <sup>2</sup>Ö-<sup>1</sup>gko-<sup>2</sup>aw-<sup>1</sup>gko seems to represent the first primordial great cause. As the entire <sup>1</sup>Na-<sup>2</sup>khi pantheon, plus the demons, etc., are dealt with in the second volume of the *ANKKEED*, there is no need to repeat them here.

The <sup>1</sup>Na-<sup>2</sup>khi worship three white stones also one large, oblong, black one, but only in the <sup>2</sup>Müan <sup>1</sup>bpö <sup>1</sup>d'a or place where Heaven is propitiated. There are also mentioned the <sup>1</sup>Ndu-<sup>2</sup>lv. Every deity has its own <sup>1</sup>Ndu-<sup>2</sup>lv or rocks with which they are able to suppress their enemies. These rocks are also white and triangular in shape, that is they must be naturally so. The original <sup>1</sup>Ndu-<sup>2</sup>lv represent <sup>1</sup>Ndu and <sup>1</sup>Ssä the equivalent of the Yang 陽 and Yin 陰 of the Chinese. They used to repose outside a gate or entrance to a house the guardians of which they were (see *NNCRC*, p. 215, note 372). The black stone rested in the rear of the altar. It was the foundation on which the home leaned and received its support. It was never removed from the <sup>1</sup>d'a or place of worship and was never touched. At many of the springs in <sup>1</sup>Na-<sup>2</sup>khi land the <sup>2</sup>Dto-<sup>1</sup>mba performed the <sup>2</sup>Ssu <sup>1</sup>ddü <sup>1</sup>gv ceremony or Nāga cult.

Otherwise there were no places set aside for worshipping gods etc. If a ceremony was to be performed, the guest room of a home was converted into an improvised chapel, and the dances of the <sup>2</sup>Dto-<sup>1</sup>mba or priests were carried out in the court of the home. Ceremonies lasted from a few hours

to five days or even more depending on the elaborateness of the ritual as for <sup>3</sup>Dto <sup>1</sup>na <sup>3</sup>k'ö, <sup>2</sup>Här <sup>2</sup>la-<sup>1</sup>llü <sup>3</sup>k'ö or <sup>2</sup>Szi-<sup>3</sup>chung <sup>1</sup>bpö, q. v. in *ANKEED*.

In the Ming dynasty Karma-pa lamaseries were established, and monks were brought from Tibet who enlisted novices among the <sup>1</sup>Na-<sup>2</sup>khi. The lamaseries never flourished and of the five founded only one, Chieh-t'olin was in fair repair, the other four had sadly degenerated.

Chinese Buddhist, as well as Taoist temples were instituted in Li-chiang but they received little support. Any poor <sup>1</sup>Na-<sup>2</sup>khi family with numerous children would send one of their sons to become a Buddhist monk, this mainly to have one mouth less to care for, especially as the male population was always in excess of the female and not every boy was assured a wife.

The <sup>1</sup>Na-<sup>2</sup>khi had a vague idea about life after death except that in their religious manuscripts belonging to the various funeral rites the soul is escorted to the realm of their ancestors and to that of the gods. Some <sup>1</sup>Na-<sup>2</sup>khi believe that man has five souls, others again believe he has three. If a person became ill it was believed that one of his souls was stolen by a demon or Nāga, and the <sup>2</sup>Dto-<sup>1</sup>mba would recall the soul, repaying the particular demon or Nāga with a chicken. To gain a comprehensive insight into the <sup>1</sup>Na-<sup>2</sup>khi religion I would refer the reader to the various books I have written on their religious ceremonies the titles of which can be found in the Bibliography, and especially to the second volume of the *<sup>1</sup>Na-<sup>2</sup>khi-English Encyclopedic Dictionary* where all their gods, spirits, in fact the entire pantheon as well as demons, etc. are enumerated.

Neither Protestant nor Roman Catholic missionaries had any success in converting <sup>1</sup>Na-<sup>2</sup>khi to the Christian religion. No <sup>1</sup>Na-<sup>2</sup>khi would work for any foreign missionary or attend their meetings. There was only one Protestant mission in Li-chiang; it belonged to the Pentecostal variety. They were forced to employ Szechuanese opium sots as helpers or lazy loafers usually Tibetan half-castes who one day were Christians, then Lamaists and when the Communists came they were the first to join the Reds.

The <sup>1</sup>Na-<sup>2</sup>khi had few joys of life and they objected to missionaries interfering with their family life and infringing upon their very modest enjoyments of life. They were told they must neither drink, smoke nor dance. The <sup>1</sup>Na-<sup>2</sup>khi are an honest people and have a much higher moral standard than most members of the white race. No woman would disrobe and would never dream of appearing in a dress like their white sisters appear in. <sup>1</sup>Na-<sup>2</sup>khi were very rarely drunk and this could be attributed to their ancient custom which prevented anyone from getting drunk; they would sit around a bowl of wine each man simultaneously taking a drink through a straw;

as much as was consumed of the wine would be replenished with water and this was repeated till there was little else than water in the bowl.

The <sup>1</sup>Na-<sup>2</sup>khi were a free people, not bashful and had a sense of self-consciousness. There were no screaming, naughty children and all in all the <sup>1</sup>Na-<sup>2</sup>khi lived a happy life, not a depressed one, although they were poor; one could not speak of wealth.

### THE SHAMAN OR <sup>2</sup>LLÜ-<sup>1</sup>BU

Next to the <sup>2</sup>Dto-<sup>1</sup>mba was the <sup>2</sup>LlÜ-<sup>1</sup>bu, the ancient shaman, the real sorcerer. The first <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>LlÜ-<sup>1</sup>bu was called <sup>2</sup>Müan-<sup>1</sup>p'a-<sup>3</sup>k'wuo-<sup>3</sup>lu. He was the shaman or <sup>2</sup>LlÜ-<sup>1</sup>bu of the mystic ancestor of the <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Müan-<sup>3</sup>llü-<sup>1</sup>ddu-<sup>2</sup>ndzi, the Tibetan Mi-tshe-ring or sGam-po dkar-po and the Mongol Tsaghan-äbghän, both also worship him. This exposition of shamanism is not a separate religion as is that of the <sup>2</sup>Dto-<sup>1</sup>mba <sup>1</sup>Na-<sup>2</sup>khi culture, but an ancient degenerate religious phenomenon. They do not succumb to a trance but remain conscious or affect semi-consciousness. The office was not inherited like that of the <sup>2</sup>Dto-<sup>1</sup>mba but was bestowed on a person by the patron saint of the shaman, the <sup>1</sup>Na-<sup>2</sup>khi mountain god <sup>2</sup>Ssan-<sup>2</sup>ddo. The present day <sup>2</sup>LlÜ-<sup>1</sup>bu is always a man and sometimes a <sup>2</sup>Dto-<sup>1</sup>mba is also a <sup>2</sup>LlÜ-<sup>1</sup>bu. More often the <sup>2</sup>LlÜ-<sup>1</sup>bu is unbalanced and disposed to nervous disorders. He suffers from hallucinations and illusions. When excited they are insensible to pain. They can wash their face in boiling rape seed oil; hold red hot plow shares between their teeth and hold red hot stones in their bare hands. They dip their hands into burning oil and drive out demons visiting every room with flaming hands, chanting mantras.

They are not tied to any particular village but are usually invited for seances by distant villages. In their performances they use a flat gong, a sword and less often a large, barrel-shaped drum, resting on the ground. At times a large iron ring from which smaller rings are suspended is in use. In an improvised chapel where a painting of <sup>2</sup>Ssan-<sup>2</sup>ddo hangs on a wall, he chants in a most peculiar wailing-type or plaintive voice, throws the sword in the air catching it in his open mouth, then runs frantically around the court of the house ringing his gong. He hypnotizes animals as a chicken for example which he then lays before <sup>2</sup>Ssan-<sup>2</sup>ddo as an offering.

Another patron of the <sup>2</sup>LlÜ-<sup>1</sup>bu is <sup>2</sup>Ä-<sup>1</sup>wu-<sup>2</sup>wüa the brother of <sup>2</sup>Ssan-<sup>2</sup>ddo. The <sup>2</sup>LlÜ-<sup>1</sup>bu wears a red turban in which two small flags are stuck;

two larger perforated flags are placed in his girdle in the back. His dress is usually a long gown of blue cotton which he often tucks into his girdle in front.

The individual who is to become a <sup>2</sup>Llū-<sup>1</sup>bu usually begins acting like one possessed, and if he is from the Li-chiang district, will dance all the way to <sup>1</sup>Dü-<sup>2</sup>gkv a village near the <sup>2</sup>Ssan-<sup>2</sup>ddo temple which he will enter and, there gyrate before the image of <sup>2</sup>Ssan-<sup>2</sup>ddo sitting on a white stone. Above the figure of <sup>2</sup>Ssan-<sup>2</sup>ddo hang a number of red scarfs on a rope. The <sup>1</sup>Na-<sup>2</sup>khi firmly believe that should <sup>2</sup>Ssan-<sup>2</sup>ddo approve of the epileptic maniac, one of the red scarfs will drop on him. This is considered the god's assent. When this happens the <sup>2</sup>Llū-<sup>1</sup>bu aspirant collapses, the red scarf is tied around his head and the man is taken home by his friends.

The <sup>2</sup>Llū-<sup>1</sup>bu performs seances on moonlight nights in homes whose owners wish to contact, through the <sup>2</sup>Llū-<sup>1</sup>bu, their long dead ancestors to seek their advise. For further information see *ANKSWC*, pp. 191-200; *SOF*, pp. 69-70, note 3, Plate 2; *NRCRC*, p. 101, note 58, Plate 27; *BODMSL*, p. 10, Plate 14; *CSTCB*, pp. 796-801, Plate 1, c and d.

#### <sup>1</sup>NA-<sup>2</sup>KHI SCRIPTS AND LITERATURE

Although the <sup>1</sup>Na-<sup>2</sup>khi lived on the periphery of civilization they developed two types of writing a pictographic as well as a syllabic; the latter was used only in transcribing mantras or dhāraṇīs; it consists of simple characters related to the Chinese and Lo-lo, but I have already refuted elsewhere the statement that the syllabic or phonetic script is a recent invention.

The pictographic script had been invented in their present home for they have drawn on nature for their pictographs; the symbols represent plants, animals and birds occurring in the region in which they live today. There are three exceptions, and the animals in question do not occur in the Li-chiang area, but far to the north in the grasslands and high mountains facing Mongolia. Although they have never seen a camel, a correct symbol for it occurs in their manuscripts; the symbol for elephant occurs both as a conventional one and as a more or less correct representation of it. They encountered elephants while fighting in Kublai Khan's army in A. D. 1277 against the Burmese.

In writing their symbols they had a brilliant sureness of touch, depicting motion in animals most realistically. The only animal of a mythical



invention is the unicorn called <sup>1</sup>ssī or <sup>1</sup>ssī-<sup>2</sup>mā-<sup>2</sup>k'o-<sup>1</sup>t'khi = the <sup>1</sup>ssī with the horn like a spine, but it may have originally represented the rhinoceros.

They invented their scripts to preserve their legends and Bön shamanistic rituals which were quite extensive and have survived, thanks to these scripts, in toto. Although the writings are of a mnemonic character, the main facts having been written down, it needed not much imagination to supply the non-essentials, except when it came to allegoric phrases when pictographs or ideographs were used phonetically for abstract ideas for which no symbols existed. They called their script <sup>2</sup>Ss <sup>3</sup>dgyu <sup>2</sup>lv <sup>3</sup>dgyu or wood record stone record, having reference to the symbols which portray trees, rocks, animals etc.

Thus in the strict sense of the word they had not evolved a literature. The paper used to write their symbols on, they must have invented prior in order to record the first ones that came to mind.

In the genealogical records of the <sup>1</sup>Na-<sup>2</sup>khi rulers it is stated that the pictographic script was invented by Mou-pao A-tsung 牟保阿琮 who lived at the end of the southern Sung dynasty A. D. 1200-1253. That it is much older there is no doubt; it must be assumed that A-tsung did not have a knowledge of Bön shamanism, for that was the prerogative of the <sup>1</sup>Na-<sup>2</sup>khi priests who alone could chant the proper litanies when they invited their gods, or pronounced certain curses on definite demons who were thereby suppressed and made harmless. Some of their compound symbols are intricate rebuses which were evolved later by the priests.

It is stated in their manuscripts that the <sup>2</sup>ggö-<sup>2</sup>baw or phonetic characters, used only for magic formulae, were invented by the disciples of the founder of their religion, namely <sup>2</sup>Dto-<sup>1</sup>mba <sup>3</sup>Shi-<sup>2</sup>lo-<sup>2</sup>mi-<sup>3</sup>wu, who is none other than gShen-rab(s)-mi-bo of the Tibetan Bön. That they were later embellished with Tibetan vowel marks is evident by their meaningless use for one syllable, when a superimposed and a subjoined vowel was employed for a single syllable.

Although the Chinese had invented paper before the <sup>1</sup>Na-<sup>2</sup>khi made their own, the former made paper from bamboo and from the bark of the paper mulberry (*Broussonetia papyrifera*). The <sup>1</sup>Na-<sup>2</sup>khi made their paper from the bark of the <sup>2</sup>Wan-<sup>1</sup>dtër (*Wikstroemia lichiangensis*) a shrub growing on the drier hillsides at an elevation of from 9,000 to 10,000 feet. They stripped the shrubs of their bark, submerged it in water weighted down by rocks, scraped off the rough outer part and macerated the rest after which they boiled it with lime and potash. When it had reached a certain consistency, the mash was poured into a frame with a horse hair mesh; depending on the thickness of the paper wanted a sufficiently thick layer

of the mash was evenly agitated till all the water had been drained off. The frame, usually a foot square, was leaned against the wall of a house, exposed to the sun and dried. It was then peeled off, cut to the size desired and then polished with river stones to a smooth surface.

Most of the <sup>1</sup>Na-<sup>2</sup>khi *ms.* are made of the bark of the <sup>2</sup>Waŋ-<sup>1</sup>dtēr while others, especially those of a later date, are made of the paper mulberry bark which is cultivated in the Li-chiang district and from which the Min-chia tribe make the fairly thin and strong white sheets called Ho-ch'ing pai-chih. I have only seen the making of the Ho-ch'ing paper but never have I observed the making of paper from the bark of the <sup>2</sup>Waŋ-<sup>1</sup>dtēr. If it was still made during the time of my residence there from 1922 to 1949 with many intermissions, I do not know, if so, it was perhaps still made in the outlying districts as in La-bbū or La-pao. But manuscripts written on fairly new <sup>2</sup>Waŋ-<sup>1</sup>dtēr paper were very rare. See appendix.

Although they have a symbol for book, there is none for paper which, in the colloquial, is called <sup>2</sup>ssä-<sup>3</sup>ssu. Owing to the excellent climate manuscripts were well preserved, but the pages were soiled through handling with greasy fingers and often rats nibbled the pages. Many had holes burned in them from oil lamps or burning pine and juniper branches used at the ceremonies. Manuscripts were always chanted never read.

During the Ming dynasty there lived at <sup>2</sup>Boa-<sup>1</sup>shī a family of three brothers known as <sup>2</sup>Dto-<sup>3</sup>la a descendant of whom, a certain Ho Kuo-chu 和國柱 was still alive in 1930. All three brothers were <sup>2</sup>Dto-<sup>1</sup>mbas and all three illuminated their manuscripts. One of their manuscripts is dated the 7th cycle of the water-chicken year, the 8th moon and 14th day of the pig at the time of the <sup>1</sup>Zü-<sup>2</sup>hä star (the 15th star of the constellation of 28). This is equal to the 17th September 1573 or the 1st year of Wan-li of the Ming dynasty, 8th moon and 14th day; „the husband, I, 27 years (old) wrote this.”

The <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Dto-<sup>1</sup>mba perform many ceremonies for all possible contingencies which have been enumerated in *NVCRC*, pp. 25-30, and *ANKĒED*, Vol. II. How many different <sup>1</sup>Na-<sup>2</sup>khi manuscripts exist is difficult to define, but it must be well around two thousand. There are two distinct types: first the books of divination or <sup>3</sup>Dso-<sup>2</sup>la books; these are of various sizes and shapes, many accompanied by charts, and most are stitched on the upper margin instead of on the left. Besides these <sup>3</sup>Dso-<sup>2</sup>la books the <sup>1</sup>Na-<sup>2</sup>khi priests employ also divination cards usually over 30 to which a string is tied or fastened to the upper margin. On the recto is usually a picture of some deity, with a text on the verso on which is explained what is auspicious or expedient to do at a given time and what is

not. From these cards an applicant who wished his or her horoscope cast drew one to be interpreted by the <sup>2</sup>Dto-<sup>1</sup>mba. Other means of divination were by means of cords which are tied and untied; the burning of the periosteum of mutton shoulder blades, the cracks produced are then interpreted by means of books like the <sup>1</sup>P'i-<sup>3</sup>khyu = or to divine the shoulder blade (see *OTLB*, p. 39, Plate 1); the burning of chicken bones etc.

The second type of <sup>1</sup>Na-<sup>2</sup>khi manuscripts are the most numerous. They are all sewn on the left side, are oblong in outline, have an elaborate title page and some, as the <sup>2</sup>Dto-<sup>3</sup>la books have the first page illuminated, often very artistically. From the books of divination the <sup>2</sup>Dto-<sup>1</sup>mba decides, the cause of the affliction and which ceremony will produce the necessary remedy.

For further references to <sup>1</sup>Na-<sup>2</sup>khi ceremonies and the manuscripts chanted during them see last part of volume two of the *<sup>1</sup>Na-<sup>2</sup>khi-English Encyclopedic Dictionary* and the *Catalogue of <sup>1</sup>Na-<sup>2</sup>khi-manuscripts* (*Verzeichnis der orientalischen Handschriften in Deutschland*, VII. 1 und 2).



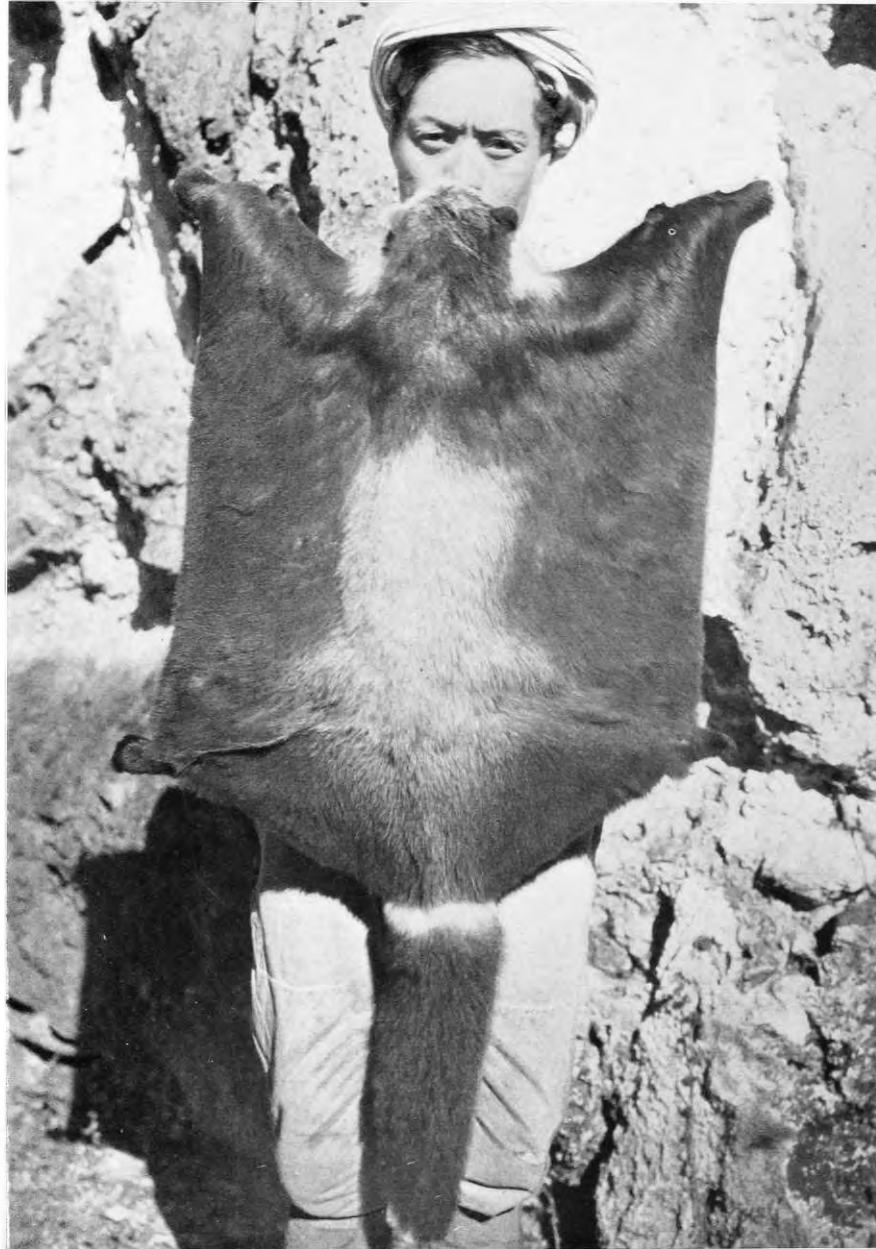
## ILLUSTRATIONS





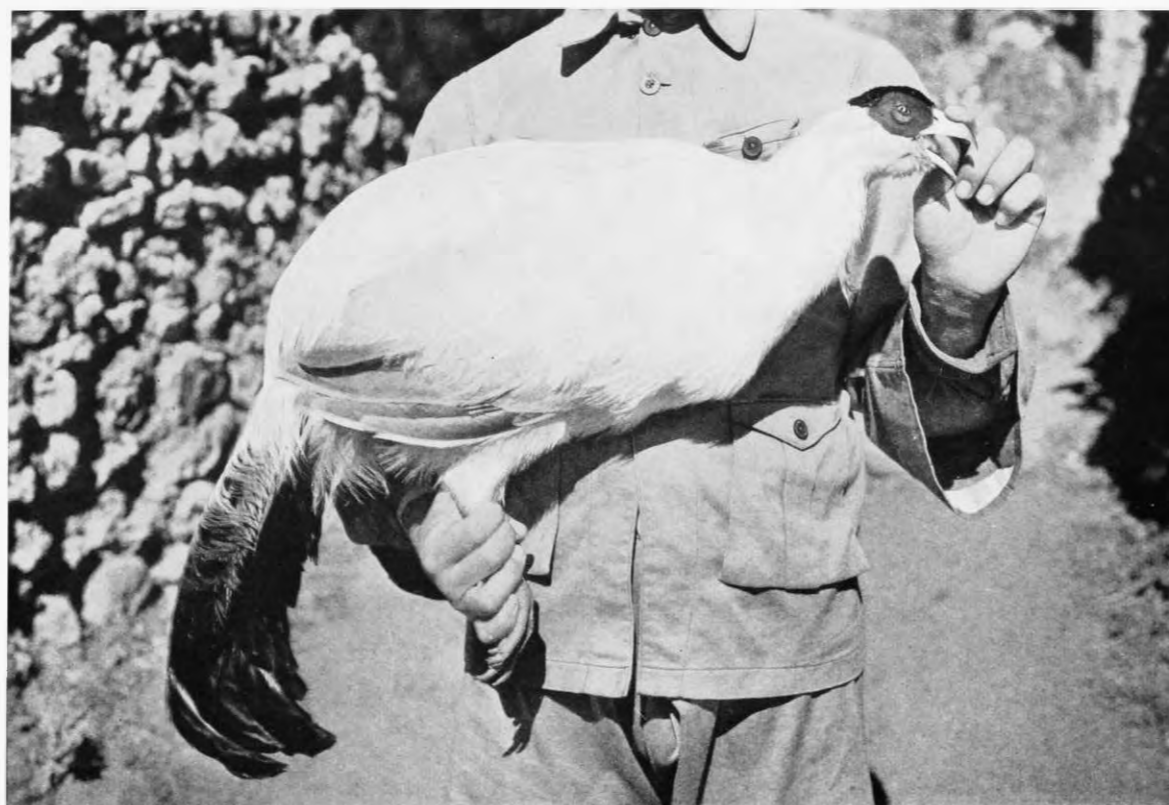
The Yü-lung Shan 玉龍山 or Jade Dragon Mountain, the 'Na-<sup>2</sup>khi <sup>2</sup>Boa-<sup>1</sup>shi <sup>2</sup>Nv-<sup>2</sup>lv, as seen from the northern slopes of Shih-tzu Shan 獅子山 or Lion Mountain looking north from an elevation of 8,300 ft. The villages in the foreground, right, are in Ta-yen li 大研里 to which Li-chiang itself belongs. The highest peak is called Shan-tzu tou 扇子陡, elevation 19,800 ft.

PLATE II



A large flying squirrel (*Petaurista alborufus ochropsis*) which, with another smaller species, inhabits the limestone caves on the western slopes of the Yü-lung Shan.





The Tibetan Eared-pheasant (*Crossoptilon Crossoptilon Crossoptilon*). The <sup>1</sup>Na-<sup>2</sup>khi <sup>2</sup>Hoa-<sup>1</sup>p'ér. It inhabits the upper slopes of the Yü-lung Shan and is confined to the northwestern part of Yün-nan and southwestern part of Ssu-ch'uan (Szechuan). It is mentioned in the life story of <sup>1</sup>Dto-<sup>2</sup>mba <sup>2</sup>Shi-<sup>2</sup>lo, the founder of the <sup>1</sup>Na-<sup>2</sup>khi religion.

PLATE IV



<sup>1</sup>Na-<sup>2</sup>khi swimmers with their inflated goat skin rafts with which they ferry travellers cross the turbulent Yangtze. This Yangtze ford is between the Li-chiang and Chung-tien hsien districts.

PLATE V



A <sup>1</sup>Na-<sup>2</sup>khi boy playing the <sup>3</sup>K-a <sup>2</sup>kwuo-<sup>1</sup>kwou or Jew's-harp. Love, as well as suicide pacts, are formed by means of this primitive musical instrument.

PLATE VI



The <sup>1</sup>Na-<sup>2</sup>khi <sup>1</sup>Bu-<sup>1</sup>ch'ër, a bone- and meatless pig used by the <sup>1</sup>Na-<sup>2</sup>khi as well as Mo-so or <sup>2</sup>Lu-<sup>2</sup>khi of Yung-ning. Only the fat was left adhering to the skin. It was salted and then sewn in the center. At New Year's, slices were cut and distributed as presents. Dropped into boiling water for a few minutes, the <sup>1</sup>ch'ër or bacon was considered a delicacy.



The famous temple of <sup>2</sup>Ssan-<sup>2</sup>ddo, the patron god of the <sup>1</sup>Na-<sup>2</sup>khi. Built between A. D. 784-785, it is situated near the village of <sup>1</sup>Dü-<sup>2</sup>gkv north of Li-chiang. Kublai Khan in A. D. 1253 conferred on <sup>2</sup>Ssan-<sup>2</sup>ddo, who is represented by a white stone, the title of Hsüeh-shih Pei-yo an-pang-ching-ti = Snowy stone Pei-yo (north sacred mountain) auspicious god of national peace.

PLATE VIII



In ancient times, prior to the establishment of the Nan-chao kingdom in A. D. 649, <sup>1</sup>Na-<sup>2</sup>khi warriors wore a blade armor of rhinoceros hide. The armor worn by this <sup>1</sup>Na-<sup>2</sup>khi is the only one extant, complete with iron helmet and swords.





Part of the <sup>1</sup>Na-<sup>2</sup>khi village of <sup>2</sup>Nv-<sup>2</sup>lv-<sup>2</sup>k'ö, the Hsüeh-sung ts'un 雪嵩村 of the Chinese at the foot of the Yü-lung Shan. Outside <sup>1</sup>Na-<sup>2</sup>khi houses the farmers erect their <sup>3</sup>gko or grain racks on which grain, turnips etc. are dried. The fan palm (*Trachycarpus fortunei*) furnishes them the rain coats made from the fibrous bases of the fronds.



Scene from the <sup>2</sup>Här <sup>2</sup>la-<sup>1</sup>llü <sup>3</sup>k'ö ceremony performed for the propitiation of the spirits of suicides. Five <sup>2</sup>Dto-<sup>1</sup>mba with swords, <sup>2</sup>ds-<sup>1</sup>er (<sup>1</sup>Na-<sup>2</sup>khi gong) and flowering branches fight sham battles with the <sup>2</sup>Ts'u and <sup>1</sup>Yu demons. The last <sup>2</sup>Dto-<sup>1</sup>mba on the right wears the iron <sup>1</sup>bä-<sup>2</sup>k'o on the large hat, also used by the Bön priests.





Two <sup>1</sup>Na-<sup>2</sup>khi women, the first is married, the second unmarried. They carry their market baskets decorated with black sheep wool on their backs. For description of clothing see text.

PLATE XII



My late <sup>2</sup>Dto-<sup>1</sup>mba Ho Hua-t'ing 和華亭 of the village of <sup>2</sup>Gkv-<sup>1</sup>na-<sup>2</sup>wua, the Chinese Ku-nan-wa 故南瓦, beginning the dance of the great god <sup>1</sup>Ssaw-<sup>2</sup>yi-<sup>2</sup>wua-<sup>2</sup>de in which he suppresses his evil counterpart, the great demon <sup>2</sup>Mi-<sup>1</sup>ma-<sup>1</sup>ssä-<sup>1</sup>ddo.

UNTERSUCHUNG DES PAPIERS ACHT VERSCHIEDENER  
ALTER NA-KHI-HANDSCHRIFTEN  
AUF ROHSTOFF UND HERSTELLUNGSWEISE

VON

M. HARDERS-STEINHÄUSER UND G. JAYME

BEITRAG AUS DEM INSTITUT FÜR CELLULOSECHEMIE  
MIT HOLZFORSCHUNGSSTELLE  
DER TECHNISCHEN HOCHSCHULE DARMSTADT

MIT 19 ABBILDUNGEN



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## EINLEITUNG, PROBLEMSTELLUNG

Acht verschiedene Original-Handschriften des <sup>1</sup>Na-<sup>2</sup>khi-Stammes aus Yünnan, im südwestlichen China nahe Li-chiang, wurden uns durch die Freundlichkeit von Herrn Professor ROCK, Honolulu, sowie das Entgegenkommen von Herrn Dr. VOIGT, Westdeutsche Bibliothek Marburg, für eine nähere Untersuchung der Papiere zugänglich gemacht. Die <sup>1</sup>Na-<sup>2</sup>khi bewohnen, wie zahlreiche andere Völkerschaften tibeto-birmanischer Herkunft, Yünnan im südwestlichen China. Sie haben eine eigeue Schrift, die teils Wortbildschrift, teils schon phonetisiert ist. Alte <sup>1</sup>Na-<sup>2</sup>khi-Handschriften gehören zu den kulturhistorischen Seltenheiten. Vielleicht bestätigt diese recht umfangreiche Papieruntersuchung die Herkunftslegende der <sup>1</sup>Na-<sup>2</sup>khi, daß sie aus dem nordwestlichen China stammen, so daß die Annahme, die <sup>1</sup>Na-<sup>2</sup>khi haben die Kunst der Papierherstellung aus ihrer alten Heimat nach Yünnan gebracht und dort weiter gepflegt, nicht ganz unbegründet ist. Noch in den zwanziger und dreißiger Jahren dieses Jahrhunderts soll die alte Papierherstellung bei den <sup>1</sup>Na-<sup>2</sup>khi geübt worden sein.

Es bedeutete eine reizvolle Aufgabe, diese Papiere recht verschiedenen Alters und in sehr verschiedenem Erhaltungszustand untersuchen und vergleichen zu können; dabei konnte schon am Anfang festgestellt werden, daß diese Papiere trotz ihres sehr verschiedenen Alters einander sowohl in den Rohstoffen als auch im Herstellungsverfahren und sogar in ihrem Format weitgehend gleichen. Dies deutet darauf hin, daß die <sup>1</sup>Na-<sup>2</sup>khi über Jahrhunderte hin dieselben Papierformen benutzt und die Papiere auf ähnliche Weise hergestellt haben.

Es war zu prüfen, ob auf Grund einer eingehenden *makroskopischen* und *mikroskopischen* Untersuchung der Papiere genauere Aussagen hierüber gemacht werden können.

## DIE ROHSTOFFE

Rock teilte uns schriftlich mit, daß nach den eigenen Angaben der <sup>1</sup>Na-<sup>2</sup>khi-Leute diese die Rinde von *Wikstroemia*, einer *Thymelaeacee*, für die Herstellung ihres Papieres verwenden (*Abb. 1a*). Der 1–2 m hohe Strauch wurde von Rock an den Abhängen der Li-chiang-Schneeberge gesammelt und als *Wikstroemia lichiangensis* W. W. Sm. bestimmt.

Zu der Familie der *Thymelaeaceen* gehören im ostasiatischen Raum außer den verschiedenen *Wikstroemia*-Arten, Gampi (z. B. *W. lichiangensis* W. W. Sm. und *W. aurantiaca* [Diels] Domke) auch noch die Gattungen *Daphne* und *Edgeworthia*, Mitsumata (*E. papyrifera*, *E. Gardneri*), die alle mehr oder weniger im fernen Osten zur Papierfabrikation herangezogen werden.

Durch die Freundlichkeit von Prof. Rock standen uns eine Reihe verschiedener *Thymelaeaceen*-Rinden (Herbarpflanzen und frische Pflanzen aus Kew Gardens) als Vergleichsmaterial zur Verfügung, bestehend aus 4 verschiedenen Proben von *Wikstroemia lichiangensis* W. W. Sm., 3 verschiedenen Proben von *Wikstroemia aurantiaca* (Diels) Domke, 3 Proben von *Daphne retusa* Hemsl., und je einer Probe von *Daphne calcicola* W. W. Sm., *Daphne acutiloba* Rehd., *Daphne odora* und *Daphne tangutica*.

Die Rinden der *Thymelaeaceen* enthalten sehr typisch gebaute Bastfasern, die besonders vielfach, wenn auch nicht immer, knorrige, verzweigte oder wenigstens gewellte, aber auch abgerundete und zugespitzte Zellenden ausbilden; die Fasern sind breit oder schmal, oft sehr fein, teils mit dicken Zellwänden ausgestattet und vielfach mit wechselnder Lumenweite bis zu stellenweise fast völlig verschwindendem Lumen (vgl. *Abb. 1*).

Die sorgfältige vergleichende mikroskopische Untersuchung der vorliegenden Pflanzenproben ergab keine eindeutigen Unterscheidungsmerkmale zwischen den verschiedenen *Thymelaeaceen*-Bastfasern; bei allen Einzelproben schwankten die Ausbildung von Zellenden, Wandstärken, Faserbreiten in derart weiten Grenzen, daß eine Unterscheidung zwischen den Mustern nicht möglich war. Wie *Abb. 2* zeigt, ist die Ähnlichkeit der Fasern der <sup>1</sup>Na-<sup>2</sup>khi-Handschrift 8466 mit denen aus *Wikstroemia aurantiaca* sehr groß.

Nachdem sich also die *Thymelaeaceen*-Fasern, die uns zur Verfügung standen, nicht mikroskopisch unterscheiden lassen, haben wir keine Veranlassung, an der Angabe der <sup>1</sup>Na-<sup>2</sup>khi-Leute über den verwendeten Rohstoff zu zweifeln. In allen Fällen, wo *Thymelaeaceen*-Fasern nachzuweisen waren, muß daher mit der Verwendung von *Wikstroemia* gerechnet werden.

Als weiterer Rohstoff wurde von uns, jedoch nur in selteneren Fällen



(ebenfalls schon von ROCK vermutet), in den <sup>1</sup>Na-<sup>2</sup>khi-Papieren auch die Bastfaser aus der Rinde von *Broussonetia papyrifera*, dem Papiermaulbeerbaum, gefunden, der im <sup>1</sup>Na-<sup>2</sup>khi-Gebiet nur um Li-chiang gedeiht (ROCK). Diese Fasern besitzen eine beträchtliche Länge (nach Literaturangaben von HÖHNEL 1905: 6–15 mm), gegenüber *Wikstroemia* eine größere Faserbreite und sind leicht zu erkennen an der weiten Hülle, die sehr viele der Fasern umgibt (Abb. 3). Die Faser mit Hülle färbt sich in Chlorzinkjod violett an; ist die Hülle zerstört, was in den alten Papieren häufig vorkommt, so färben sich die darunter freiwerdenden Zellwandschichten braunrötlich wie Baumwolle an. Eine Verwechslung mit Baumwolle scheidet aber ausgeschlossen, da gegenüber der sehr viel längeren Baumwolle hier viel mehr natürliche rundliche Faserenden zu finden sind, und die baumwollartige Drehung der Fasern nur sehr selten, und zwar nur bei sehr dünnwandigen Fasern auftritt.

In dem einen aus *Broussonetia* hergestellten Papier der <sup>1</sup>Na-<sup>2</sup>khi-Handschriften wurde im übrigen ein Stück einer *Blatt-Epidermis* von *Broussonetia* mit gebogenen Haaren gefunden (Abb. 4), wie wir sie an Herbarmaterial von *Broussonetia* in gleicher Form nachweisen konnten; außerdem waren zahlreiche *Spiralgefäße* zu erkennen. Abb. 5 zeigt eine solche Gefäßgruppe, aus der <sup>1</sup>Na-<sup>2</sup>khi-Handschrift Garuḍa stammend, noch im natürlichen Verband und deutlich einer Blattnervatur zugehörend, an einer Stelle noch mit dazwischen ausgespanntem Parenchym.

Unzerstörte *Broussonetia*-Papiere zeigen, wenn sie dünn genug sind, um im Durchlicht beobachtet werden zu können, in den spitzen Winkeln der übereinandergelagerten Fasern des Faserfilzes fast immer feine ausgespannte „Folien“, welche die Winkelspitzen abrunden, oft körnig erscheinen und eine geschlosseneren Oberfläche liefern. Vielleicht stammt das Material dieser „Folien“ aus dem Milchsaft der *Moraceen*-Rinde. Eine weitere Möglichkeit für die Entstehung dieser „Folien“ in den Faserwinkeln der Papierblätter läge darin, daß die lockere feine Hülle der *Moraceen*-Bastfaser besonders durch die Pottaschekochung in einen hohen Quellungszustand übergeführt wird, dann bei der mechanischen Behandlung in dünne Häutchen zerteilt wird, die sich dann in den Winkeln sammeln und so als „Klebemittel“ zur Verfestigung des Faserfilzes beitragen. Auch in den Faserwinkeln von uns hergestellter Gampipapiere fand sich häufig ein ähnliches Material, das aber in diesem Fall aus zerquetschten Parenchymzellen zu bestehen schien. Diese Papiere waren auch beidseitig matt, während die aus *Broussonetia* gewonnenen Blätter ohne jede glättende Nachbehandlung eine einseitige Glätte annahmen. Mindestens zeigten auf primitive Weise ohne fremden Zusatz aus Maulbeerbaum-

rinde im Laboratorium von uns hergestellte Papierblätter die gleiche Erscheinung. Dies kann als Erklärung dafür angesehen werden, daß *Broussonetia*-Papiere offenbar bis zu einem gewissen Grade *schreibfest* sind.

Die *Broussonetia*-Rinde enthält außerdem zahlreiche Zellreihen mit eingeschlossenen Kalziumoxalat-Kristallen; diese Oxalatkristalle sind im Papier vielfach wiederzufinden. Auf Grund aller dieser besonderen Merkmale ist *Broussonetia* als Rohstoff mit Sicherheit nachweisbar.

Als letzte Faserart der  $^{14}\text{C}$ - $^{14}\text{C}$ -Papiere wurde in einem Spezialfall (Handschrift 8466, Zierpapier auf dem Titelblatt aufgeklebt) auch eine *Graminee* nachgewiesen, gekennzeichnet durch große breite *Tüpfelgefäße*, dickwandige schmale, halbmondförmig gebogene *Fasern* und seltener auch breitere, längere Fasern, sowie *Gramineen-Parenchym* (vgl. Abb. 6). Da – nach mündlicher Mitteilung von ROCK – im  $^{14}\text{C}$ - $^{14}\text{C}$ -Gebiet *Bambus* gedeiht, das Faserbild auch diesem entspricht, kann man hier das Vorliegen von *Bambus*-Papier annehmen. Während die Identifizierung der meisten *Gramineen* sich hauptsächlich auf die typisch gestalteten Epidermiszellen mit mehr oder weniger starker Randzackung stützen kann, fehlen diese Zellen bei *Bambus* fast stets; sie sind hier sehr klein ausgebildet, und die Epidermis bildet im Verhältnis zu der Masse der dicken Stämme nur einen kleinen Anteil. Dafür sind aber die großen *Bambus*-Gefäße sehr charakteristisch gestaltet.

#### BESCHREIBUNG DER EINZELNEN HANDSCHRIFTEN

Bei den vorliegenden Schriften handelt es sich in allen Fällen um kleine, am *linken Rand gebundene* Bücher im oblongen tibetischen Format, aus 8 bis 18, einmal 29 Blättern bestehend und in der Größe im Höchstfall 95 auf 293 mm erreichend.

*Tabelle 1* gibt weitere Einzelheiten über die acht untersuchten Handschriften.

Tabelle 1:

 BESCHREIBUNG DER UNTERSUCHTEN  
<sup>1</sup>NA-<sup>2</sup>KHI-HANDSCHRIFTEN

Lfd. Nr.	Besitzer	Bezeichnung	Format mm	Blattzahl	nutzmaßl. Alter	Zustand	Miniaturen, Verzierungen
1	Rock	„Garuda“	88:275	10			farbiger Tigerkopf, braunrote Verzierung auf Titelblatt
2	Westdt. Bibliothek Marburg	6082 = Hs. or. 1450	89:283	18	15. Jh.	Titelbl. verstärkt	farbige Eingangsminiatur, Titelblatt blau verziert
3	Westdt. Bibliothek Marburg	2173 = Hs. or. 1373	72:285	8	sehr alt	sehr brüchig, unterer Rand fehlend	ohne
4	Westdt. Bibliothek Marburg	8275 = Hs. or. 1469	95:293	12	100 Jahre	gut	ohne
5	Westdt. Bibliothek Marburg	8466 = Hs. or. 1517	88:285	14		zieml. gut	farbige Miniatur (grob), Schrift in Doppelzeilen
6	Westdt. Bibliothek Marburg	8161 = Hs. or. 468	83:274	29		Titelbl. stark beschädigt	ohne
7	Westdt. Bibliothek Marburg	8239 = Hs. or. 544	90:275	13			schwarze Eingangsminiatur
8	Westdt. Bibliothek Marburg	8498 = Hs. or. 634	90:292	12	sehr alt	außen stark beschädigt	farb. Eingangsminiatur, fast identisch mit der in Hs. 6082, 1. Schriftzeichen farbig

Auffällig ist die schon oben angedeutete große Übereinstimmung im Format; die Höhe schwankt nur zwischen 72 und 95 mm, die Breite zwischen 274 und 293 mm.

Im folgenden werden die einzelnen Handschriften getrennt beschrieben.

## 1. HANDSCHRIFT „GARUDA“

Diese Handschrift, betitelt „Der Kampf zwischen Garuda und dem Schlangenfürsten gCug na rin chen“ setzt sich aus zwei unbeschriebenen, nur auf den Außenseiten leicht verzierten Einbandblättern (*Abb. 7*) und 8 Textblättern (*Abb. 8*) zusammen.

Die *Textblätter* bestehen aus einem *feinen* Papier von 0,18–0,36 mm Stärke, in dem die Fasern, welche als *Wikstroemia* bestimmt wurden, einzeln, nicht in Bündeln zusammenliegen; das Papier scheint *einschichtig* aufgebaut. Schon äußerlich unterscheidet sich der *Einband* wesentlich von dem Textpapier; die Blätter sind doppelt bis dreimal so dick (0,67 mm), die Oberfläche ist *grob* und viele *Faserbündel*, unaufgeschlossene Teile, sind zu erkennen. Die mikroskopische Untersuchung zeigt, daß hier die Rinde des Papiermaulbeerbaumes verwendet wurde. Offenbar wurde diese mit jungen Blättern oder Knospen vom Holz abgerissen, da, wie *Abb. 4* und *5* beweisen, Blattepidermis und Blattnervatur-Gefäße eindeutig nachgewiesen werden konnten.

Außer den deutlichen Unterschieden in der Feinheit der Papierarten von Titelblatt (*grob*) und Textblatt (*fein*) zeigen die *Abb. 7* und *8* auch noch die verschiedene „Tintenfestigkeit“ dieser Papiere. Während die Schriftzeichen auf dem *Titelblatt* einen völligen *glatten* Rand zeigen, läuft die Tusche auf dem *Textblatt* nach beiden Seiten des Striches infolge der Langfaserigkeit des Papieres aus, dabei feine, ziemlich lange Spitzen bildend.

Hier finden wir auch einen wesentlichen Unterschied zwischen *Broussonetia*- und *Thymelaeaceen*-Papier: der zur Pflanzenfamilie der *Moraceen* gehörende Papiermaulbeerbaum enthält in seiner Rinde *Milchsafttröhren*, deren Inhalt offenbar auch ohne zusätzlichen Leim eine gewisse „Leimung“ des Papieres bewirkt. Das aus *Thymelaeaceen*-Rinde gebildete Papierblatt hingegen bedarf zur „Tintenfestigkeit“ eines leimenden *Zusatzes* (z. B. Stärke) zur Fasermasse oder eines *Aufstriches* mit Stärke oder einem anderen geeigneten Material (R. NEBESKY-WOJKOWITZ erwähnt in diesem Zusammenhang für tibetische Papiere einen Aufstrich von verdünnter Milch). Das Bindematerial des vorliegenden Buches war eine dicke, *zusammengedrehte* „Kordel“, die, vorsichtig aufgeweicht, sich als ein Papierblatt aus *Broussonetia*-Fasern erwies. *Abb. 9* zeigt ein solches Papier bei schwacher Vergrößerung: ein in der Schicht sehr dünnes, ungleichmäßig mit dichten und dünnen Stellen durchsetztes Blatt.

Zweifellos handelt es sich hier um einen Vorgänger der als Naturfaserersatz oft hergestellten „*Papierkordel*“, die durch Zusammendrehen schmaler Streifen sogenannten „*Spinnpapieres*“ technisch erzeugt wird.

Das Papier der Einbandblätter zeigt hie und da größere *Pilzkolonien*, die der von WIESNER beschriebenen *Flechtenleimung* in einem ostturkestanischen Papier, wahrscheinlich aus dem 7. Jahrhundert stammend, ähneln. Es scheint aber sicherer, im vorliegenden Falle an eine nachträgliche Verpilzung des naß gewordenen Papiers zu glauben.

Das Textpapier zeigt an manchen Stellen einseitig eine Art *Gewebemuster* (*Leinenbindung* eines Stoffes) und dann fast immer auf der anderen Seite des gleichen Blattes eine mehr oder weniger parallele Längsstreifung (5 mm Abstand). Auf dieses Merkmal vieler der vorliegenden Papiere wird weiter unten im Zusammenhang eingegangen werden.

## 2. HANDSCHRIFT NR. 6082,

JETZT WESTDEUTSCHE BIBLIOTHEK MARBURG, HS. OR. 1450

Diese Handschrift wurde von ROCK in „The <sup>1</sup>Na-<sup>2</sup>khi Nāga cult and related ceremonies“ in *Serie orientale Roma*, 1952, S. 767, als Übersetzung veröffentlicht. Der Priester <sup>2</sup>Dso-<sup>3</sup>la hat das Manuskript zu Anfang der Ming-Dynastie, im 15. Jahrhundert, geschrieben. Der Einband ist auf Vorder- und Rückseite mit schwarzen geometrischen Ornamenten auf blauem Grund verziert; die erste Textseite trägt eine farbige Eingangsminiatur eines auf einem Kissen sitzenden Priesters in rotem Gewand.

Als Faserstoff zum Binden dieses Buches diente ein dünner, fester Baumwollfaden; es scheint jedoch nicht sicher, ob er so alt wie das Buch selbst ist. Das kleine Buch besteht aus 18 Blättern des gleichen Papiers, nur wurde das Titelblatt auf der Innenseite durch eine Lage fremden Papiers verstärkt, so daß das im ganzen Buch *zweischichtige* Papier hier *dreischichtig* wurde.

*Abb. 10* zeigt am abgestoßenen Rand die hier nacheinander endenden drei Lagen, von denen die vorderste dunkel, die mittlere hell und feinfaserig, die innerste hell und grobfaseriger erscheint. Die mikroskopische Untersuchung ergab, daß das feine, nur wenig Faserbündel enthaltende Hauptpapier aus *Thymelaeaceen*-Fasern, das aufgeklebte Verstärkungspapier aus den größeren *Broussonetia*-Fasern gebildet ist. Im Papier nachgewiesene Stärkekörner erklären die Tintenfestigkeit des Papiers.

Hier stoßen wir also auf die interessante Erscheinung, daß die beiden wichtigsten Rohstoffe bei derselben Handschrift *gleichzeitig* Verwendung fanden.

Die Papierblätter zeigen z. T. eine feine, z. T. auch eine gröbere *Längsstreifung* meist nur auf einer, selten auf beiden Seiten; an einer Stelle wurde die Andeutung eines *Gewebemusters* gefunden.

### 3. HANDSCHRIFT NR. 2173,

JETZT WESTDEUTSCHE BIBLIOTHEK MARBURG, HS. OR. 1373

Hier handelt es sich um ein sehr altes, nur 8 Blätter umfassendes Manuskript einer Begräbniszeremonie, eines der seltensten und den meisten <sup>1</sup>Na-<sup>2</sup>khi-Priestern unbekanntes Manuskript, mit Texten, die in sehr alter Zeit vor Begräbnissen gesungen wurden. Es stammt aus La-pao nördlich Lichiang und trägt die Bezeichnung „To light the lamp“. Es wurde von Rock übersetzt in „The <sup>2</sup>Zhi-<sup>3</sup>mä Funeral ceremony“. Das ohne farbige Verzierungen mit schwarzer, nicht auslaufender Farbe geschriebene Manuskript weist ein von den übrigen Handschriften abweichendes, schmaleres Format auf; es fehlt aber offenbar der unterste Rand; die untere Zeile scheint nur etwa zur Hälfte vorhanden, und auch die Bindekordel sitzt nicht symmetrisch. Denkt man sich dies ergänzt, so gelangt man zu dem üblichen Format von etwa 90 x 285 mm.

Das einheitliche, dunkelbraune, am Rand schwarzbraune, sehr brüchige Papier ist voluminös wie die meisten <sup>1</sup>Na-<sup>2</sup>khi-Papiere, hat eine Stärke von 0,21–0,31 mm, ist grob und zeigt viele schlecht getrennte, bis zu 2 cm lange Fasergruppen, so daß das ganze Papier einen mehr primitiven Eindruck macht. *Abb. 11* gibt die grobe Textur des Papiers zu erkennen. Es läßt sich vielfach auf kleinen Strecken in 4–5 Einzellamellen auseinanderheben. Als Fasermaterial wurde *Thymelaeaceen*-Bast erkannt.

### 4. HANDSCHRIFT NR. 8275,

JETZT WESTDEUTSCHE BIBLIOTHEK MARBURG, HS. OR. 1469

Diese, eine Begräbniszeremonie enthaltende Schrift, ist etwa nur 100 Jahre alt und besitzt mit 95 x 293 mm das größte, und da am Rand offenbar kaum angestoßen, auch das Originalformat der <sup>1</sup>Na-<sup>2</sup>khi-Schriften. Sie ist, ohne Farben, nur schwarz auf 12 gleiche Blätter eines weichen, voluminösen, gelblich-hellen Papiers geschrieben, dessen drei Blattpäckchen durch eine Papierkordel (*Broussonetia*) zusammengehalten werden. Das

*einschichtige* Papier hat eine rauhe und eine glatte, etwas glänzende Seite. Auf der rauhen Seite sind wiederum manchmal eine Art *Gewebemuster* zu erkennen und hie und da parallele, leicht erhabene *Leisten*, in denen die sonst wirr liegenden Fasern gerichtet sind. *Abb. 12* gibt eine solche erhabene Leiste wieder.

Nach Mitteilung von ROCK wird das <sup>1</sup>Na-<sup>2</sup>khi-Papier auf einem mit einem *Baumwolltuch* bespannten Rahmen von Hand gearbeitet, auf dem es auch trocknet; anschließend wird es dann mit einem glatten Stein geglättet. Papierstellen mit Gewebemuster müssen also von der Siebseite stammen, während die glatte Papierseite auf einer festen Unterlage, z. B. einem Brett, zu liegen kam und daher auch vielfach die *Brettmusterung* in feinen Längsstreifen zeigt.

Die hier beobachteten erhabenen Leisten dagegen liegen gerade auf der rauhen Siebseite und sind vermutlich aus vertieften Rillen im Sieb entstanden oder vielleicht durch Zwischenräume zwischen den Verstärkungsleisten zu erklären.

Das vorliegende Papier erscheint in der Durchsicht sehr ungleichmäßig; dünne und dichte Stellen finden sich dicht nebeneinander; oft liegen größere Mengen von Fasern, die an sich gut aufgeschlossen und einzeln sind, doch in einer Gruppe in gleicher Richtung: Das Papier ist sicher nicht aus einer Suspension geschöpft, sondern im Sieb von Hand verteilt, ähnlich wie es TSCHUDIN als die primitive und älteste Art der Papierherstellung beschreibt, die in Chieng-mai, Tibet und den südchinesischen Provinzen Yünnan und Kwangtung heute noch anzutreffen sei. Die mikroskopische Untersuchung ergab ein ungeleimtes *Thymelaeaceen*-Papier mit deutlich auslaufender Schrift und Blattstärken zwischen 0,10 und 0,37 mm.

#### 5. HANDSCHRIFT NR. 8466,

JETZT WESTDEUTSCHE BIBLIOTHEK MARBURG, HS. OR. 1517

Diese Handschrift führt in jeder der drei üblichen Zeilen über der Bilderschrift noch eine gleichbedeutende phonetisierte Schrift. Das Titelblatt trägt links und rechts Streifen von aufgeklebtem, dünnem, grünlichem Papier, die 1. Textseite eine farbige Eingangsminiatur, einen tanzenden Priester oder Magier in den Farben rot, grün, gelb und blaugrau. Die Zeichnung ist grob, nicht fein ausgeführt, wie auch die Schriftzeichen vielfach fleckig und unordentlich auslaufend sind. Das aus 14 Blättern bestehende Buch ist aus 3 Blattpäckchen zu je 2 Doppelblättern zusammengebunden;

in ein Päckchen ist noch ein Doppelblatt eingeschoben, das auch nicht ganz so tief wie die anderen Blätter in den Bindefalz hineinreicht.

Das gesamte Buch ist aus dem gleichen gelbbraunen Papier gefertigt; die Blätter sind sehr ungleichmäßig zugeschnitten und wenig ordentlich im Aufbau; trotzdem zeigen die sorgfältig vermessenen Blattstärken, daß die einzelnen Blätter ursprünglich größeren Bogen zugehörten:

Blatt 1, 2, 3, 6 = 0,11–0,34 mm

Blatt 4, 5 = 0,15–0,24 mm

Blatt 7–14 = 0,07–0,29 mm

Das voluminöse Papier läßt sich, wie einige andere der <sup>1</sup>Na-<sup>2</sup>khi-Papiere, von der Kante her in mehrere Lagen spalten – aber nie sehr tief. Die Frage taucht auf, ob die dicken Papiere aus mehreren Lagen sehr dünner Papiere in feuchtem Zustand zusammengedautsch wurden, oder ob die Papierherstellung von Hand unwillkürlich in gewissen Bereichen zu einer Lamellierung führte. Auch dieses einseitig glatte Papier zeigt auf der rauhen Seite Andeutungen von Gewebemustern, daneben recht oft erhabene Leisten mit gerichteten Fasern; auf der glatten Seite erkennt man eine Parallelstreifung, die einem Brettmuster entsprechen könnte. Das Papier wurde aus *Thymelaeaceen*-Rinde hergestellt. Das dem Titelblatt aufgeklebte Zierpapier dagegen besteht eindeutig aus einem *Bambus*-Material; zum Binden wurde eine aus *Broussonetia*-Papier zusammengedrehte Papierkordel verwandt. Hier wurden mithin zur Herstellung der fertigen Schrift drei verschiedene Rohstoffe verwandt.

#### 6. HANDSCHRIFT NR. 8161,

JETZT WESTDEUTSCHE BIBLIOTHEK MARBURG, HS. OR. 468

Diese umfangreichste der vorliegenden Handschriften (29 Blätter) soll angeblich *nicht* aus *Wikstroemia* hergestellt sein. Die Untersuchung hat dies nur zum Teil bestätigt; die auf nicht gefaltete Einzelblätter mit schwarzer Bilderschrift ohne Farben geschriebene Handschrift besteht aus *zwei* Papiersorten. Das Titelblatt ist stark beschädigt und mit Papier zusammengeklebt, und da die Schrift der beiden Papiersorten sich deutlich unterscheidet, liegt es nahe, anzunehmen, daß die beschädigte Handschrift später *ausgebessert* (einzelne andersartige Schriftzeichen sind auf dem ersten Papier zu erkennen) und durch eingeschobene Blätter *ergänzt* wurde.

Die sorgfältige Durchmusterung der Handschrift erlaubt es, schon



makroskopisch zwei Papiersorten zu unterscheiden; es gleichen sich die Blätter 1–4 und 13–29 einerseits und die Blätter 5–12 andererseits. Der Grundunterschied des Papiers liegt im Rohstoff; die *Hauptmasse* besteht aus *Broussonetia*-Faser, die Blätter 5–12 aus *Wikstroemia*. Dabei fällt auf, daß das *Broussonetia*-Papier nicht wie üblich (siehe auch die folgende Handschrift) sehr dünn ist, sondern den gleichen Aufbau wie die anderen <sup>1</sup>Na-<sup>2</sup>khi-Papiere mit voluminösem Charakter aufweist; es ist allerdings aus zwei Lagen zusammengegauscht. Die charakteristischen Unterschiede der beiden Papiere, aus denen die Handschrift Nr. 8161 besteht, sind in Tabelle 2 zusammengestellt.

Tabelle 2:

 UNTERSCHIEDE ZWISCHEN DEN BEIDEN PAPIEREN  
 DER HANDSCHRIFT NR. 8161

	Blätter Nr. 1–4 + 13–29	Blätter Nr. 5–12
Rohstoff	Broussonetia	Wikstroemia
Stärke mm	0,09–0,19	0,14–0,21
Papier	glatt, glänzend, gut aufgeschlossen	grobe Bündel
Tusche	grau	schwarz
Schriftbild	sorgfältig	unordentlich
Erhaltungszustand	besser	schlechter
Tintenfestigkeit	gut	auslaufend
Muster	ohne Streifung	mit Streifung

Einzelne Schriftzeichen der Blätter 2 und 3 sind mit dunkler Tusche geschrieben; man kann also annehmen, daß die Blätter 5–12 das neue, wenn auch schlechtere Papier darstellen, mit dem die Handschrift repariert wurde. Die *Abb. 13* und *14* bringen den verschiedenen Charakter von Papier und Schrift der beiden Papiersorten sehr deutlich zum Ausdruck; je ein Tierkopf von Blatt 5 (*Abb. 13*) und Blatt 24 (*Abb. 14*) werden gezeigt. Der dicke Knoten, mit dem das zusammengedrehte *Broussonetia*-Papier gebunden war, wird in *Abb. 15* gezeigt.

## 7. HANDSCHRIFT NR. 8239,

JETZT WESTDEUTSCHE BIBLIOTHEK MARBURG, HS. OR. 544

Nach Rock (briefliche Mitteilung vom 7. 10. 1959) sind einige, aber sehr wenige <sup>1</sup>Na-<sup>2</sup>khi-Handschriften aus sehr *dünnem* *Broussonetia*-Papier hergestellt. Eine dieser abweichenden Schriften liegt hier vor; sie besteht einheitlich aus 13 Blättern eines sehr dünnen Papiers, die am *rechten* Rand des Buches gefaltet sind und links unter der Bindung (Kordel aus gleichem Papier) offen enden. Jedes aufgefaltete und dann einseitig beschriebene Blatt besitzt das Format 90 x 550 mm. Das Papier dieser Handschrift ist also nicht aus zwei feucht aufeinandergepreßten und daher nicht mehr zu trennenden Papierlagen (wie die vorige) entstanden, sondern in jedem Blatt aus zwei *losen* Lagen von nur 0,04–0,07 mm Dicke gebildet. Die Papieroberfläche ähnelt der von *Abb. 14*.

In der Durchsicht zeigt das dünne und dichte Stellen enthaltende Papier vielfach eine regelmäßige, dichte Rippung, welche die Herstellung auf einem *Schöpfesieb* (*Bambussieb*) wahrscheinlich erscheinen läßt. Die chinesischen Papiere werden durch Schöpfen mit dem Bambussieb hergestellt.

Das relativ glatte, leicht glänzende Papier ist von gelbbraunlicher Farbe, vom sehr dunklen Rande her nach innen etwas aufhellend; die Schrift, schwarze Tuschezeichen und schwarze Eingangsminiatur, läuft nicht aus, schlägt aber an dünnen Stellen bis auf die Gegenseite durch: Daran kann man erkennen, daß es erst *nach* dem Binden beschrieben wurde.

## 8. HANDSCHRIFT NR. 8498,

JETZT WESTDEUTSCHE BIBLIOTHEK MARBURG, HS. OR. 634

Die Handschrift beginnt auf der ersten Textseite mit einer farbigen Eingangsminiatur, einem auf grünem Kissen sitzenden Priester in orange-rottem Gewand mit rotem Kragen, die der Miniatur in der aus dem 15. Jahrhundert stammenden Handschrift Nr. 6082 auffällig gleicht.

Die vorliegende Schrift macht einen sehr alten Eindruck mit stark zerstörtem und repariertem Einband; sie besteht aus 12 Blättern eines einheitlichen Papiers, das sich von den übrigen untersuchten <sup>1</sup>Na-<sup>2</sup>khi-Papieren durch eine andere Blattdichte unterscheidet; es ist nicht voluminös, sondern *fest* und *dünn* (0,08–0,17 mm Papierstärke).

Das innen gleichmäßig gelbe, vermutlich gefärbte, außen sehr dunkle *Thymelaeaceen*-Papier ist offenbar mit *Stärke geleimt*; *Abb. 16* beweist

die Anwesenheit von Stärkekörnern; diese Stärkeleimung bewirkt, daß die Schrift nicht ausläuft.

Infolge der höheren Blattdicke zeigt das Papier die schon hie und da an den anderen Papieren mehr oder weniger deutlich erkannten Muster besonders deutlich; *Abb. 17* gibt ein Gewebemuster, das Muster eines Baumwolltuches, eindeutig wieder. Die in *Abb. 18* gezeigte Gegenseite des gleichen Blattes läßt ebenso gut eingedrückt eine parallele Streifung, die sich ohne Mühe als das Muster eines Holzbrettes erweist, erkennen. Dies gibt Hinweise auf die Herstellungsweise dieses Papiers; offenbar wurden die mehr oder weniger angetrockneten, aber noch etwas feuchten Papierblätter von dem Baumwollsieb auf ein Holzbrett zum *Nachglätten* übertragen

Das Titelblatt dieser Handschrift ist noch durch aufgeklebtes dunkelblau gefärbtes Papier verziert: Dieses Papier besteht wiederum aus *Broussonetia*fasern.

In *Tabelle 3* sind die wichtigsten an den Papieren der 8 Handschriften gefundenen Untersuchungsergebnisse zusammengestellt.

Tabelle 3:

ZUSAMMENSTELLUNG DER UNTERSUCHUNGSERGEBNISSE

Lfd. Nr.	Blatt	Farbe	Dicke mm	Schichten	Papierbeschreibung	schreibfest	Rohstoffe
1	Titel	braun fleckig	0,67	1	rauh, grob	ja	Broussonetia
	Text	braun	0,18–0,36	1	fein	nein	Wikstroemia
2	Titel	gelbbraun, vom Rand her dunkel	0,40	3	fein, Faserbündel	ja	Wikstroemia u. Broussonetia
	Text	gelbbraun, vom Rand her dunkel	0,14–0,33	2	fein, Faserbündel	ja	Wikstroemia
3	Gesamt	dunkelschwarzbraun	0,21–0,31	4 ?	grob	ja	Wikstroemia
4	Gesamt	hellgelb	0,13–0,37	1 (Lamellen ?)	weich, fein	nein	Wikstroemia

Lfd. Nr.	Blatt	Farbe	Dicke mm	Schichten	Papierbeschreibung	schreibfest	Rohstoffe
5	Gesamt	gelbbraun	0,06– 0,34	2(?)	dick, qm-Gewicht = ~ 130 g	nein	Wikstroemia
6	1–4	dunkel	0,09– 0,19	1	gut, fein	ja	Broussonetia
	+13–29 5–12	dunkel	0,14– 0,21	1	feine Faser, grobe Bündel	nein	Wikstroemia
7	Gesamt	gelbbraun, Rand sehr dunkel	0,04– 0,07	1	Einzelfasern, glatt	ja	Broussonetia
8	Gesamt	innen hell, außen sehr dunkel	0,08– 0,17	1	fest, glatt, keine Faserbündel	ja	Wikstroemia

## DIE PAPIERHERSTELLUNG

Nach mündlicher Mitteilung von Rock kochen die  $^1\text{Na-}^2\text{khi}$  ihre für die Papierbereitung vorgesehene *Wikstroemia*-Rinde in Pottasche. Der mehr oder weniger gut in Einzelfasern zerlegte Stoff wird dann möglichst gleichmäßig mit Stäbchen auf einem im Wasser schwimmenden Sieb aus Baumwollgewebe oder Roßhaar verteilt, das dann zum Trocknen in die Sonne gestellt wird; anschließend wird das Blatt noch mit einem glatten Stein geglättet. Die Herstellung eines Blattes durch Verteilen der Fasern in Handarbeit auf einem Sieb, auf dem wenig Wasser zur Verteilung der Fasern zur Verfügung steht, muß notwendigerweise zu einem weniger gleichmäßigen Papierblatt führen, als das chinesische und japanische Verfahren der Handpapierherstellung durch Schöpfen mit einem (Bambus-) Sieb aus der stark verdünnten Fasersuspension. Wir haben auch in keinem Falle wirklich gleichmäßige Papiere unter den  $^1\text{Na-}^2\text{khi}$ -Manuskripten gefunden.

Allgemein ist dagegen feststellbar, daß der Grad der Ungleichmäßigkeit schwankt, was wiederum auf dem angewandten primitiven Verfahren beruht, bei dem die Geduld und Geschicklichkeit des ausübenden Papiermachers bei der Vorbereitung des Faserstoffes und insbesondere bei der Zerteilung auf dem Sieb mit wenig Wasser die Güte des erzeugten Papiers bestimmen.

Man kann aus dem fertigen Papier noch weitere Einzelheiten über das angewandte Verfahren der Papiergewinnung ablesen. Dies betrifft zunächst die Natur des Siebes. *Abb. 17* zeigt deutlich das Muster eines in „Leinenbindung“ gewebten als Sieb benutzten Stoffes, das sich auf dem Papier abgedrückt hat. Es finden sich immer nur kleine Stellen mit einem solchen Muster auf der rauhen Seite des Papiers; diese stellt also die Siebseite dar, weil das Blatt später nachgeglättet wird. Zu diesem Zweck wird offenbar das angetrocknete, aber noch etwas feuchte Blatt vom Sieb abgezogen und umgekehrt auf eine feste, glatte Unterlage aufgedrückt. Die glatte Papierseite zeigt vielfach mehr oder weniger parallel oder leicht schräg zueinander verlaufende, oft leicht erhabene oder auch in das Papier eingedrückte Streifen (*Abb. 18*), die man leicht als das Muster eines längs geschnittenen Brettes ansehen könnte.

Ungeklärt ist noch die Entstehung breiter, parallel liegender erhabener Leisten mit vorwiegend längsgerichteten Fasern, die sich in etwa 1–2 cm Abstand auf der rauhen Siebseite vieler der Papiere finden. Erklärungsmöglichkeiten wären hier entweder Stützlamellen des Stoffes unter dem Sieb, zwischen die sich ein nicht gut genug gespanntes Sieb durchhängen und so mehr Fasern sammeln könnte, oder Markierungen durch ein flächiges, rissiges Instrument, mit dem das abgehobene, halbgetrocknete Papier auf die Unterlage aufgedrückt wird.

## DAS FORMAT UND DAS BINDEN DER HANDSCHRIFTENBÜCHER

In Tabelle 1 waren die Maße der einzelnen Manuskripte in mm angegeben. Da die Bändchen vielfach am Rand stark abgestoßen sind, müssen sie ursprünglich etwas größer gewesen sein. Nur die neueste, etwa 100 Jahre alte Handschrift Nr. 8275 ist noch in derart gut erhaltenem Zustand, daß man ihr die ursprüngliche Größe zuschreiben kann. Im übrigen sind die Maßangaben in der Tabelle einander sehr ähnlich, und wenn man, wie oben geschehen, die stark beschädigte Handschrift 2173 ergänzt, so kann man annehmen, daß die <sup>1</sup>Na-<sup>2</sup>khi *feststehende Formate* für ihre Handschriften und wahrscheinlich auch für ihre *Papiersiebe* hatten.

Die ursprünglichen Papierbogen waren sicher größer als das kleine Handschriftenformat; an dem schon erwähnten, gut erhaltenen Manuskript 8275 läßt sich dies auch nachweisen. Dieses Buch besteht aus drei verschiedenen Blattpäckchen zu je vier Blättern, die links gebunden sind.

Jedes der Blattpäckchen wurde aus einem großen Bogen im Format 190 x 590 mm durch zwei aufeinander senkrecht stehende Knicke gefaltet und dann nur an den Längskanten aufgeschlitzt; der Knick der Schmalseite ist im Einband zu erkennen. Daß die vier jeweils ein Blattpäckchen bildenden Blätter aber tatsächlich aus einem einzigen großen Blatt stammen, beweist die Tatsache, daß der Längsschnitt nicht immer sauber durchgeführt wurde, so daß vielfach noch Teile des einen Blattes am oberen Rande des Nachbarblattes verblieben und dort noch, genau auf die andere Seite passend, zu finden sind. Das im Falle dieser Handschrift verwendete Papier hat eine glatte und eine rauhe Seite; entsprechend dem oben erklärten Gang der Blattfaltung zeigen stets die äußersten und innersten Seiten eines Blattpäckchens eine glatte und die dazwischenliegenden Seiten eine rauhe Oberfläche.

Will man annehmen, daß alle <sup>1</sup>Na-<sup>2</sup>khi-Handschriften auf die gleiche Weise durch Falten aus großen Bogen hergestellt wurden, müßte die Blattzahl immer durch 4 teilbar sein; dieser Forderung entsprechen die Handschriften 3, 4 und 8, und nach Abzug des andersartigen Einbands auch die Handschriften 1 und 2. Bei Handschrift 5 war schon oben erwähnt worden, daß in eines der Viererpäckchen von rechts noch zwei Blätter eingeschoben sind, so daß auch hier die Zahl 4 bleibt. Abweichende Anzahl besitzen dann nur noch die Handschriften 6 und 7, die aus *Broussonetia*-Papier hergestellt sind (die *Wikstroemia*-Blätter in Handschrift 6 – ebenfalls in der Viererzahl – wurden später als Ersatz eingelegt).

Bei Handschrift 7 betrachten wir es nicht als ganz sicher, daß es sich dabei tatsächlich um ein <sup>1</sup>Na-<sup>2</sup>khi-Papier handelt, da daran eine deutliche Siebmarkierung, wohl verursacht durch ein Bambussieb, nachweisbar ist.

Das so abgeleitete Format von 190 x 590 mm für die ursprünglichen Bogen bedeutet nun noch nicht zwangsläufig, daß auch die Siebform dieselbe Größe besessen haben muß. Ein derart schmaler Siebrahmen ist wohl nicht handlich und zweckmäßig genug; TSCHUDIN gibt für das Papiersieb der Chieng-mai eine Fläche von 480 x 565 mm an, für chinesische Baumwollsiebe 440 x 545 mm. Diesem handlichen Format käme man näher, wenn man das Bogenformat für das <sup>1</sup>Na-<sup>2</sup>khi-Papier verdoppelte und annähme, das von den <sup>1</sup>Na-<sup>2</sup>khi verwendete Sieb hätte eine Größe von etwa 380 x 590 mm besessen. Diese Überlegungen sind jedoch rein spekulativer Art.

Da die untersuchten <sup>1</sup>Na-<sup>2</sup>khi-Manuskripte aus sehr verschiedenen Zeiten stammen, kann man sicher aus dem gleich gebliebenen Format nach dem Falten schließen, daß dieser Volksstamm über Jahrhunderte hinweg die

gleichen Papiersiebformate verwendet hat und wohl auch nach demselben alten Verfahren gearbeitet hat: In keinem Falle waren grundsätzliche Unterschiede im Papier festzustellen.

### VERGLEICH MIT PAPIEREN VON NACHBARSTÄMMEN

Zum Vergleich mit den <sup>1</sup>Na-<sup>2</sup>khi-Papieren standen uns einige Proben von Stämmen der weiteren Umgebung zur Verfügung. Zunächst hatten wir ein Papier der Min-chia-Leute (Nan-chao) aus Ho-ch'ing, zwei Tagereisen südlich von Li-chiang, dem Gebiet der <sup>1</sup>Na-<sup>2</sup>khi, in Händen, das im Jahre 1931 für Professor Rock angefertigt war. Das sehr dünne Papier bestand aus *Broussonetia*-Fasern und zeigte sehr deutlich die „Folien“ in den Faser-Winkeln. Es wurde offenbar auf chinesische Weise auf einem Bambussieb geschöpft; dies bewies die sehr regelmäßige, parallelgestreifte Siebmarkierung.

Weiterhin waren uns zwei seltene Lo-lo-Handschriften der Westdeutschen Bibliothek Marburg, Hs. or. 688 und 689, zugänglich gemacht worden. Die Lo-lo bilden mit anderen Stämmen eine große tibeto-birmanische Volksgruppe in Südwest-China. Die Papiere der beiden Handschriften waren nur 0,03 mm dick, also sehr dünn; das eine war aus *Bambus*-Faser, das andere aus *Thymelaeaceen*-Bast hergestellt. Beide Muster zeigen eine deutlich feine parallele Streifung dichter und dünnerer Stellen als Siebmarkierung eines Bambussiebes, mit dem sie offenbar nach chinesischer Weise geschöpft waren.

Ebenfalls aus nicht großer Entfernung von den <sup>1</sup>Na-<sup>2</sup>khi stammt die sehr seltene Chung-chia-Handschrift (Westdeutsche Bibliothek Marburg, Hs. or. 687), die wir untersuchen durften. Die dickeren Blätter dieser Handschrift bestehen aus zwei sich sehr leicht trennenden dünnen Papierlagen, Rohmaterial *Broussonetia*-Faser, die wiederum die Bambus-Siebmarkierung zeigen.

Diese uns zur Verfügung stehenden Papiere aus der Nachbarschaft der <sup>1</sup>Na-<sup>2</sup>khi waren demnach sämtlich nach einer von dem <sup>1</sup>Na-<sup>2</sup>khi-Verfahren abweichenden Arbeitsweise hergestellt; nur die 7. <sup>1</sup>Na-<sup>2</sup>khi Handschrift bestand aus einem geschöpften Papier.

Tschudin berichtet über die Papierherstellung bei den Chieng-mai-Leuten im nördlichen Thailand, deren Verfahren sich mit dem der <sup>1</sup>Na-<sup>2</sup>khi zu decken scheint. Allerdings ist das dem Aufsatz beigegebene Papier sehr dünn. Aus den Angaben von Tschudin läßt sich für diese Papiere ein

Quadratmetergewicht von etwa 15 g berechnen, während ein typisches  $^1\text{Na}$ - $^2\text{khi}$ -Papier ein Quadratmetergewicht von 130 g besaß, also etwa das 10fache. Ob die  $^1\text{Na}$ - $^2\text{khi}$ -Papiere aus ebensolchen, sehr dünnen Papieren durch Aufeinanderlagsen mehrerer Lagen in feuchtem Zustand entstehen, oder ob sie von Anfang an als dicke Papiere auf dem Sieb gebildet werden, ließ sich nicht sicher entscheiden. Die Ungleichmäßigkeit der Papiere macht letzteres wahrscheinlicher.

Am Schluß der Untersuchung möchten wir nicht versäumen, auf einen Punkt hinzuweisen, der uns bei der Beurteilung der  $^1\text{Na}$ - $^2\text{khi}$ -Papiere ganz wesentlich erscheint. Die Fasern, selbst in den ältesten dieser Papiere, sind noch wohl erhalten und lassen niemals eine starke mechanische Behandlung, etwa ein Stampfen, erkennen. Da gerade die *Thymelaeaceen*-Fasern schon bei relativ leichtem Druck auf das Deckglas im mikroskopischen Präparat breite Quetschstellen zeigen, ist kaum anzunehmen, daß diese Fasern einer mechanischen Behandlung besonders gut widerstanden hätten.

WIESNER fand in alten ostturkestanischen und anderen asiatischen Papieren fast immer ein Fasermaterial vor, das durch mechanische Behandlung derart stark geschädigt, zerfasert, fibrilliert war, daß die Identifizierung der Ursprungspflanze vielfach nicht mehr möglich war.

Auch wir konnten eine Reihe Tun-huang-Papiere neben zahlreichen anderen tibetischen Papieren aus den verschiedensten Quellen untersuchen, worüber an anderer Stelle berichtet werden soll. Es soll aber hier schon darauf hingewiesen werden, daß sich gerade unter den Tun-huang-Papieren viele mit „gemahlenem“ Rohstoff befanden, während vielfach die tibetischen Papiere aus ungemahlenen Fasern hergestellt erscheinen.

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## ABBILDUNGEN





Abb. 1a. Abbildung einer *Wikstroemia lichiangensis* W. W. Smith. Das <sup>2</sup>Wan-<sup>1</sup>dter der <sup>1</sup>Na-<sup>2</sup>khi, aus deren Rinde die <sup>2</sup>Dto-<sup>1</sup>mba das Papier für ihre Manuskripte herstellten. Freundlicherweise zur Verfügung gestellt von Dr. H. R. Fletcher, Royal Botanik Garden, Edinburgh, Scotland.

TAFEL XIV

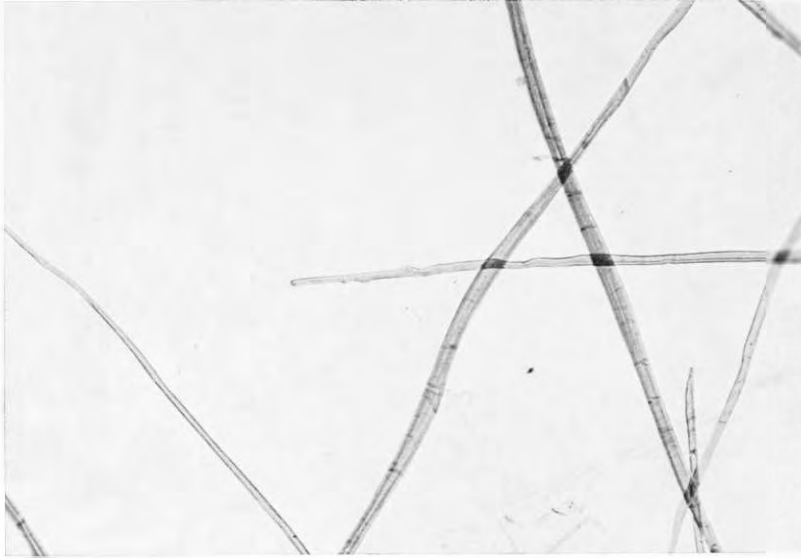


Abb. 1. Wikstroemia aurantiaca Domke; Faserbild. 145-fach



Abb. 2. <sup>1</sup>Na-<sup>2</sup>khi-Handschrift 8466; Thymelaeaceenfaser. 145-fach

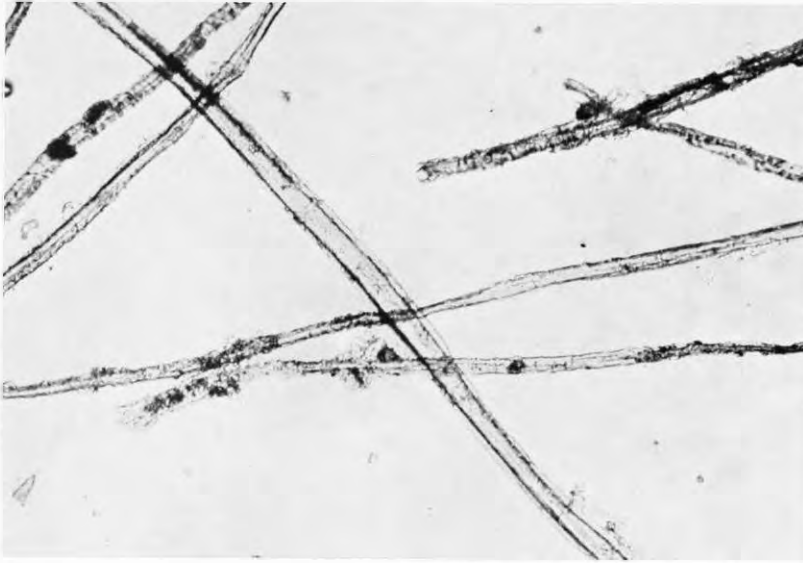


Abb. 3. 'Na-<sup>2</sup>khi-Handschrift 8161; Broussonetia-Fasern mit Hülle, aus dem Titelblatt. 145-fach

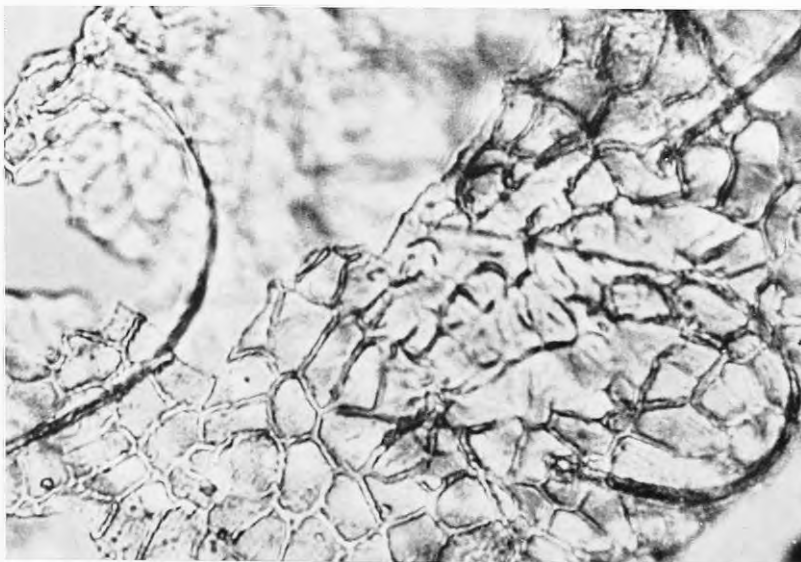


Abb. 4. 'Na-<sup>2</sup>khi-Handschrift Garuda; Broussonetia-Epidermis mit gebogenen Haaren, aus dem Titelblatt. 700-fach

TAFEL XVI

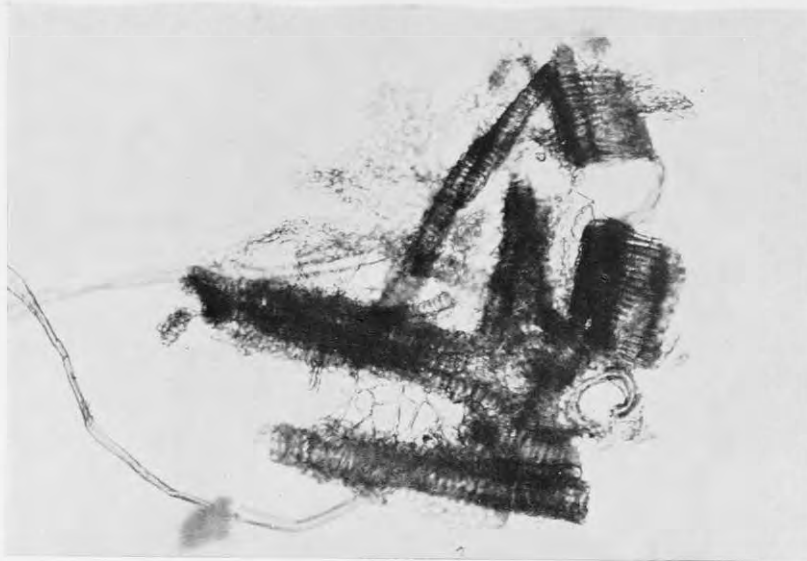


Abb. 5. <sup>1</sup>Na-<sup>2</sup>khi-Handschrift Garuda; Blattnerven-Gefäße aus dem Titelblatt. 190-fach

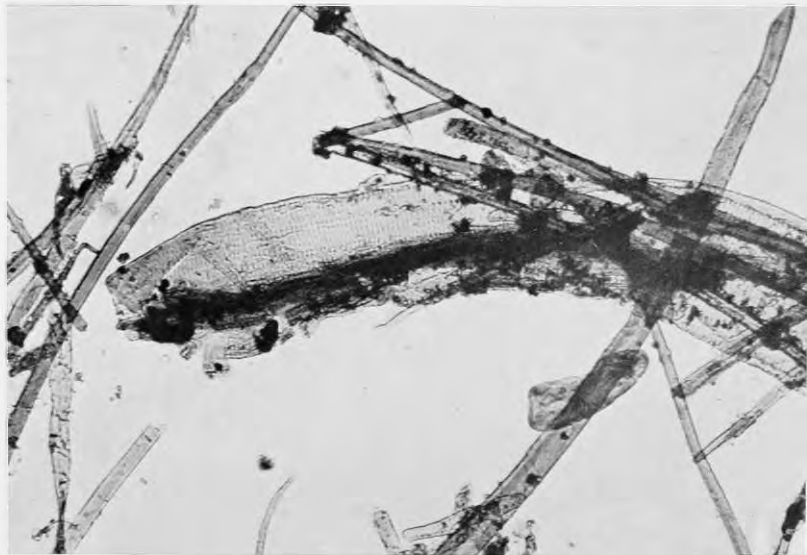


Abb. 6. <sup>1</sup>Na-<sup>2</sup>khi-Handschrift 8466; Bambusgefäß und Fasern aus der Titelblatt-Verzierung. 180-fach

TAFEL XVII



Abb. 7.  $^{23}\text{Na}$ - $^{23}\text{K}$ -Handschrift Garuda; Titelblatt-Papieroberfläche; grobe Faserbündel, Schrift nicht auslaufend. 10-fach

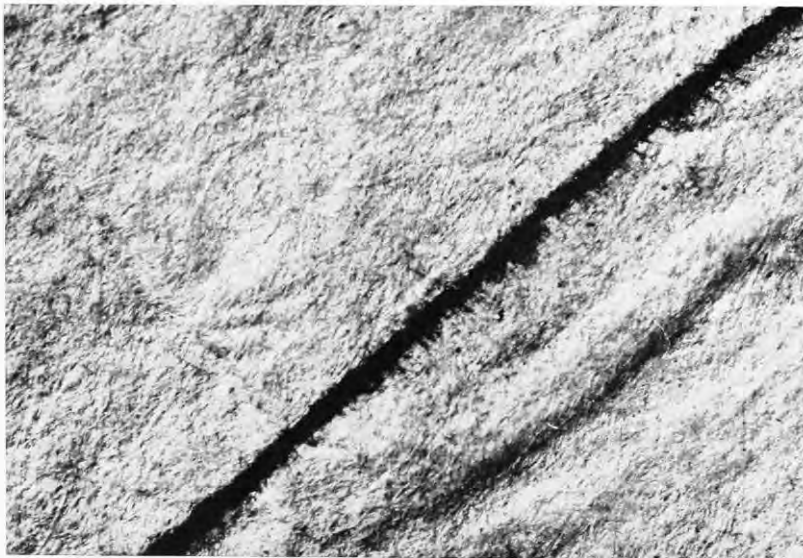


Abb. 8.  $^{23}\text{Na}$ - $^{23}\text{K}$ -Handschrift Garuda; Textblatt-Papieroberfläche; feines, bündelfreies Papier; auslaufende Tusche. 10-fach

TAFEL XX



Abb. 13. <sup>1</sup>Na-<sup>2</sup>khi-Handschrift 8161; Tierkopf von Blatt 5, ungleichmäßiges Papier, ausgelaufene Schrift; geringe Schreibfestigkeit. 7-fach



Abb. 14. <sup>1</sup>Na-<sup>2</sup>khi-Handschrift 8161; Tierkopf von Blatt 24, gleichmäßiges Papier, saubere, scharf umrandete Schrift; hohe Schreibfestigkeit. 7-fach





Abb. 15.  $^1\text{Na}$ - $^2\text{khi}$ -Handschrift 8161; Knoten des Bindegarns aus gedrehtem Broussonetia-Papier. 7-fach

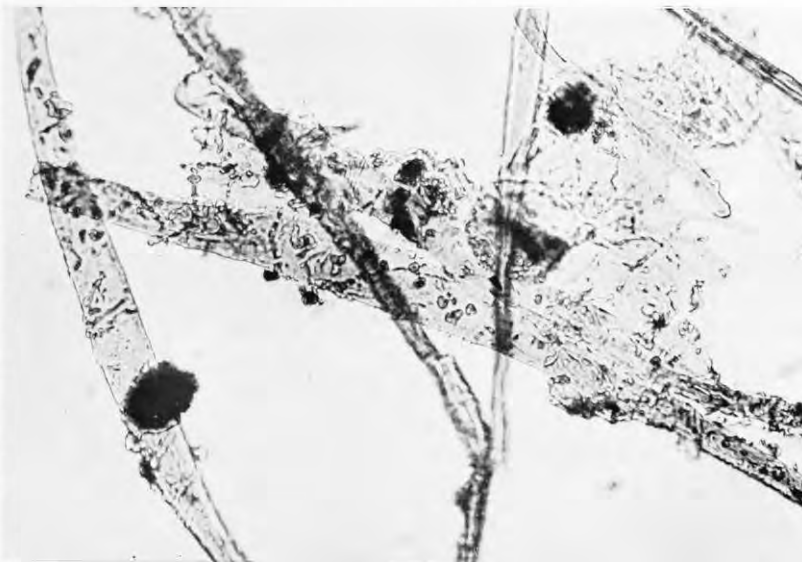


Abb. 16.  $^1\text{Na}$ - $^2\text{khi}$ -Handschrift 8498; Faserbild mit Stärkekörnern in Chlorzinkjod violett gefärbt. 365-fach

TAFEL XXII



Abb. 17. <sup>1</sup>Na-<sup>2</sup>khi-Handschrift 8498; Textpapier mit Siebmuster, 7-fach

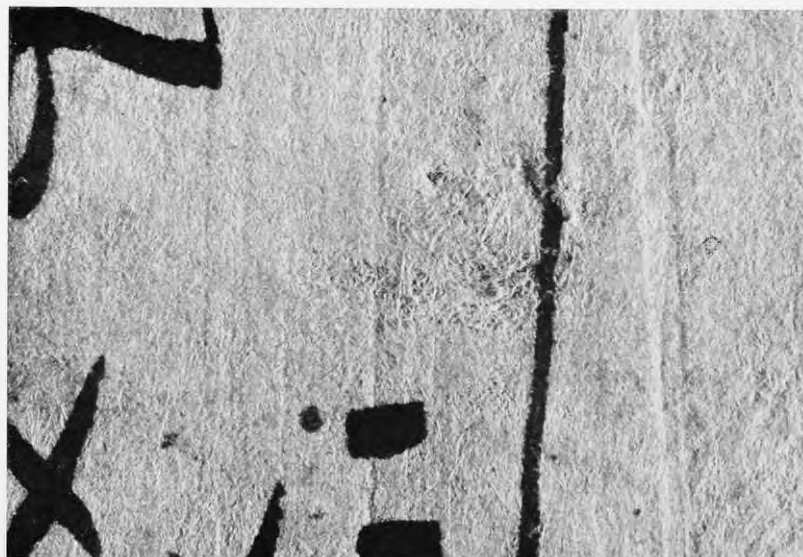
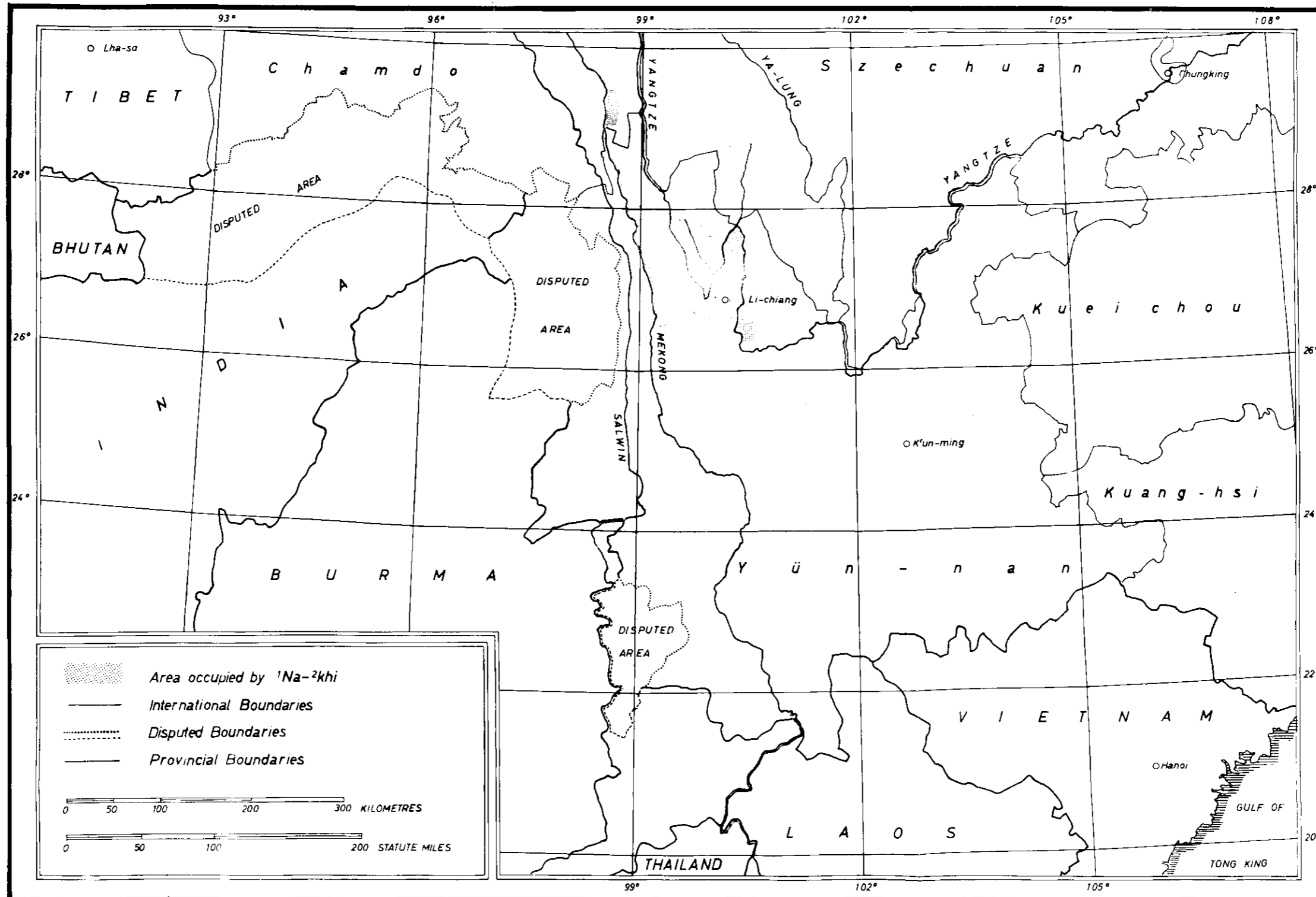


Abb. 18. <sup>1</sup>Na-<sup>2</sup>khi-Handschrift 8498, Textpapier mit Streifenmuster auf der glatteren Seite, 7-fach



J. F. ROCK and W. BUCHGE 1962







