



EAST OF THE HIMALAYAS —To the Alps of Tibet—

Pioneering Expeditions, Notable Ascents & Adventures and Scientific Field Researches



East of the Himalayas : to the Alps of Tibet
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The Japanese Alpine Club



Japanese Alpine News

Vol.4 May 2003 Special Submission

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The Japanese Alpine Club**

JAPANESE ALPINE NEWS

SPECIAL SUBMISSION

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East of the Himalayas

Tamotsu Nakamura

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Front Cover: The magnificent north face of Kongga 6488m in the headwaters of Puyu valley, south of Pelber (Pemba), Nyainqentanglha East (Tamotsu Nakamura).

JAPANESE
ALPINE
NEWS

Vol.4 MAY 2003

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Design & Printing
Gihodo Company Ltd.

Published by:
The Japanese Alpine Club
5-4 Yonbancho Chiyoda-ku Tokyo 102-0081 Japan
Phone : 03-3261-4433 Fax : 03-3261-4441
E-mail : jac-info@jac.or.jp
Web : <http://www.jac.or.jp>
http://www.jac.or.jp/english/jac_e.htm
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FOREWARD

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"Today the map has no more secrets." Idle minds repeat that parrot phrase. But who knows all Tibet, or its far-away frontier on western China? Even its own prayer-muttering tribes know only their own bleak, wind-swept valleys."

National Geographic Magazine. February 1930

This is the opening paragraph of Joseph. F. Rock's account of his journey seeking the mysterious mountain, Amne Machen in late 1920's.

Three-quarters of a century rewrote Chinese history. A wave of reform in China transformed Tibet too. The open-door policy carried out by Deng Xiao-ping since 1980 has enabled foreign climbers to gain access to the unknown Greater Ranges in Tibet and neighboring regions. Currently the West China Development Plan is being launched as far as the most isolated frontier. But as a result less-frequented Tibetan rural areas are suffering from rapid changes in many respects that will affect their life style whether they like it or not.

Nevertheless, however, once off the beaten tracks in East and Southeast Tibet, West Sichuan, Northwest Yunnan, West Qinghai and North Myanmar, you will come across untouched stunning peaks and glaciers, hidden gorges, beautiful forests, pastures, flora and fauna, historic monasteries and hospitable local inhabitants.

This special submission on East of the Himalayas is an outcome of my 25 exploratory journeys to the borderland and related studies for thirteen years since 1990. I take this opportunity to express my heartfelt gratitude to Mr. Nicholas B. Clinch, Dr. Michael Ward, Mr. Harish Kapadia, Mr. Joss Lynam, Mr. Ed Douglas, Mr. Ernst Haase, Mr. Christian Beckwith, Mr. John Harlin, Mr. Bernard Domenech and many friends overseas and in Japan as well for their continued support and encouragement. Particular thanks are due to Hitotsubashi University Mountaineering Club for their financial contribution and also to Mrs. Motoko Nakamura for her generousities and thoughtfulness.

May 2003

Tamotsu Nakamura

Where the Five Great Rivers Meet

The mountain region, which I call as '**The Alps of Tibet in East of the Himalayas**', spreads over from the Qinghai-Tibetan Plateau to the western rim of Sichuan basin. The upper streams of the five great rivers in Asia flow down north to south forming deep valleys. The five rivers are squeezed at one place into a span of 150 km, from where they flow to the south for a considerable distance. Then each of the five rivers separate and becomes a river of its own, each flowing into major bodies of water:- Yangtze enters the Pacific near Shanghai; Mekong enters the South China Sea; Salween and Irrawaddy flow into Andaman Sea; Rohit and its principal stream, Tsangpo-Bhuramaputra flows into Bay of Bengal of the Indian Ocean. The drainage patterns are controlled by the relevant geological structure and create an outstanding feature.

In general, the good period for climbing is before or after the rainy season that begins in end June and ceases in end September, that is, from May to mid June or from end September to November. However, as the climate and weather patterns of the mountain ranges are not always uniform but much complicated, they are referred to in each section of the text described hereinafter.

NYAINQENTANGLHA EAST

Geography, Explorations and Mountaineering

Nyainqentanglha is a huge mountain range 750km in an overall length, extending from west to east between latitude 30° N and 31° N. The westernmost end is a massif of four 7000m peaks south of the Tibetan sacred lake, Nam Tso, while the easternmost end extends to Rawu that is located to the east of Tsangpo Great Bend. The mountain range is divided into two parts, West and East, near Lhari.

The western part of the range, **Nyainqentanglha West**, forms a part of the high altitude Qinghai-Tibetan Plateau. Tohoku University of Japan made the first ascent of the highest peak, Nyainqentanglha (7162m) in 1986. All of the other 7000m peaks have already been climbed. Glacier development is concentrated only in the vicinity of the mountaintops. Snow lines are as high as 5700m.

The eastern part of the range, **Nyainqentanglha East** is located on the southeastern rim of Qinghai-Tibetan Plateau. The upper tributaries of Yalung Tsangpo erode the plateau into deep valleys like sawing seams. The topography becomes complicated. The climate is humid and brings much snowfall, which fosters glaciers, makes tempting snow peaks and grows beautiful conifer forests. The highest peak on the main range is Sepu Kangri (6956m) that was repeatedly challenged by the British party of Chris Bonington and Charles Clarke in 1996, 97, and 98 successively. They reached very close to the summit in 1998. (*TIBET'S SECRET MOUNTAIN, The Triumph of Sepu Kangri*, 1999). On October 2, 2002, American party sponsored by Gore and Marmot accomplished the first ascent of Sepu Kangri.

From a viewpoint of the water drainage system, the main range of Nyainqentanglha East forms the watershed between Yalung Tsangpo and Salween River (Nu Jiang). There are the upper Salween in the north and two tributaries of Yalung Tsangpo, Yigong Tsangpo and Parlung Tsangpo in the south. Countless peaks exceeding 6000m exist still veiled and unvisited. Almost all except for Sepu Kangri massif are not known as of today. Glaciers are well developed. One of them, Qiaqing Glacier, which is the largest one in the mountain range, has a length of 35km.

The branch range that separates from the main range near Lhari to the east in the south of Yigong Tsangpo is to be included in Nyainqentanglha East. Here are many fascinating lofty snow peaks too. Mountains and valleys surround a scenic and historical spot with a lamasery. Turquoise blue Lake Basong brings to mind the European Alps. I call them "Alps of Tibet". The highest peak, Nenang (6870m) is guarded with a precipitous snow face and a treacherous ridge. The breathtaking pyramid, Jajacho (or Kajaqiao 6447m) soaring into the sky, is most impressive and alluring. The following is a brief chronicle of the explorations, scientific researches and climbing:-

The Main Range is divided to the three Sub-Ranges of 1, 3 and 4 while the Branch Range constitutes Sub-Range 2. The following is a division of the Sub-Ranges and a brief chronicle of the explorations, scientific researches and climbing in the respective Sub-Range:-

Sub-Range 1: Northwest Region north of Yigong Tsangpo-Sepu Kangri Massif

Sub-Range 2: Lhari to Lake Basong Region south of Yigong Tsangpo

Sub-Range 3: Central Region north of Yigong Tsangpo on Tsangpo-Salween Divide

Sub-Range 4: East Region of Botoi Tsangpo basin and north of Parlung Tsangpo

(Early Explorations)

1. Pandit Kishen Singh, A—K sent by the Survey of India travelled along the old China Road from northeast to southwest crossing Shargung La and marching south of Sepu Kangri to Lhari then to Lhasa in 1882.
2. Brigadier General George Pereira followed the same route as A—K in 1922 on his journey from Beijing to Lhasa.
3. Frank Kingdon-Ward accessed to Lake Basong from east and reached Lhari after his travel to quest the Tsangpo Great Bend in 1924.
4. Ronald Kaulback and John Hanbury-Tracy entered the eastern part of the range from Bomi and crossed Tungla La on the Tsangpo-Salween Divide to quest the upper Salween basin in 1935 - 1936.

(Scientific Field Surveys)

1. China Academy of Sciences conducted a field survey and research of Ruoguo Glacier north of Yigong Tso in 1975.
2. In 1989 the China and Japan joint party of their science institutions carried out a field survey and research of Zepu Glaceir and its vicinity of Botoi Tsangpo north of Bomi, Parlung Tsangpo.

(Current Mountaineering Activities)

Sub-Range 1

1. British party of Chris Bonington and Charles Clarke challenged Sepu Kangri via West Ridge approaching from the north in 1996, 97 and 98. Victor Saunders and Scott Muir reached the west shoulder (6830m) of Sepu Kangri in 1998.
2. At 9:45 on October 2, 2002, in whiteout conditions, Carlos Buhler and Mark Newcomb stepped onto the storied summit of 6956m. They followed the Bonington route on the West Ridge. In

summary the ridge is not a difficult route, but it is a long one and skis are key, Mark Newcomb describes.

Sub-Range 2

1. Japanese parties from Nagano Prefecture went twice in 1994 and 2000. They explored the northern side of Kajaqiao in 1994 and entered the valley north of Lake Basong in 2000.
2. In 1999 a New Zealand party led by John Nankervis challenged two peaks to the east of Lake Basong. One of the two is Jieqinnalagabu 6316m and another 6000m peak. (New Zealand Alpine Journal 2000).
3. In June 2001 T. Nakamura's party tried to go down Yigong Tsangpo from Lhari, but frequent and dangerous landslides impeded them to carry on the trip soon after they had left Lhari.
4. In September 2001 John Town and his colleague visited the valley north of Lake Basong. (They lectured in AC meet.)
5. In March - April 2002 John Town and Nicola Mart entered Yigong Tsangpo from Lhari and made a reconnaissance of the northwestern side of Nenang 6870m, now the highest unclimbed peak in Nyainqentanglha East as Sepu Kangri has already been scaled by an American party. (Summary Report on British Nyewo Chu Expedition 2002 for Mount Everest Foundation)
6. In April 2002 an American party of Mark Jenkins and John Harlin attempted to climb Jieqinnalagabu 6,316m east of Lake Basong but was not successful.
7. In October - November 2002 T. Nakamura's party conducted the explorations in two phases. In Phase I, they made a reconnaissance of the southern slope of Nenang from Jula and ascended to a high pass Laqin La 5300m on the watershed to Niwu Chu.

Sub-Range 3

1. In 2000 Charles Clarke made an access from the north and approached unvisited glaciers south of Shargung La. (British Tibet Expedition 2000 Report for Mount Everest Foundation)
2. In April - May 2002 T. Nakamura's party searched for peaks and glaciers of the central part of the range in the headwaters of Puyu valley and Dam Dol valley south of Pelbar (Pemba) on the Tsangpo-Salween Divide.

Sub-Range 4

1. In November 2002, in continuation of journey to the Sub-Range 2, T. Nakamura's party explored unknown peaks surrounding Zepu Glacier and Jalong Glacier in Botoi Tsangpo basin, a tributary of Parlung Tsangpo. Here remain many magnificent untouched 6,000 peaks.

Glaciers Development

According to "An Introduction to Glaciers in China" (Langzhou Glaciers Research Institute, Chinese Academy of Sciences, Beijing 1988), there are 2,905 glaciers in the Nyainqentanglha Range, of which the total area amounts to 5898km² covering approx. 7% of the total area of the mountain range. If 1638km² of the adjacent Kangri Garpo is added, the total area of glaciers becomes 7536km², which ranks fourth among 12 glaciated regions in China. The total area is 1.7 times as large as that of the European Alps. Glaciers in Nyainqentanglha East are of an oceanic type and exceed those of West in terms of the number and area as well. They are concentrated in Yigong Tsangpo and Parlung Tsangpo that flow into Tsangpo Great Bend. The glaciers in the 200km between Lhari and Qingdo account for 30% of the total glacier area of the range.

Main Glaciers of Nyaiqentanglha Range

Name of Glacier	Glacier End	Main Peak	Snow Line	Length	Area	GL End Height
	E - N	(m)	(m)	(km)	(km ²)	(m)
West						
Xibu	90° 36'E - 30° 23'N	7162	5717	12.7	18.3	5072
East						
Qiaqing	94° 50'E - 30° 23'N	6356	4510	35.0	151.5	2530
Jiangpu	94° 33'E - 30° 26'N	6382	4495	21.0	132.7	3160
Zepu	95° 15'E - 30° 17'N	6349	4683	19.2	65.8	3420
Nalong	94° 57'E - 30° 30'N	6132	4732	18.0	95.0	3580
Jiabiegong	94° 58'E - 30° 28'N	6349	4553	15.0	46.6	3076
Maguolong	95° 06'E - 30° 29'N	6252	5000	14.0	58.2	4060
Daoge	94° 33'E - 30° 25'N	6000	4816	14.0	63.3	3950
Aigagong	93° 37'E - 30° 23'N	6620	4929	13.0	46.0	3800
Ruoguo	94° 45'E - 30° 32'N	6026	4715	14.0	47.2	3630
Gongpu	94° 44'E - 30° 21'N	5900	4221	12.0	30.1	2700

Distribution of Current Glaciers in China

No.	Mountain Range	Snow line (m)	Nos. of glacier	Area of Glacier (km ²)	Volume of ice (km ³)
1.	Altay Shan	2800 - 3350	416	293.20	16.49
2.	Tianshan	3600 - 4300	8,908	9,195.98	1,010.67
3.	Qilian Shan	4400 - 5400	2,859	1,972.50	95.44
4.	Kun Lun Shan	4500 - 6000	7,774	12,482.20	1,302.08
5.	Pamir	4200 - 5900	2,112	2,992.85	248.73
6.	Karakoram	5000 - 5600	1,848	4,647.17	604.49
7.	Chang Tang Plateau	5100 - 6200	1,821	3,108.81	263.01
8.	Tanglha Shan	5400 - 5700	936	2,082.00	62.00
9.	Gangdise Shan	5800 - 6000	3,099	1,667.75	50.32
10.	Nyaiqentanglha	4600 - 5600	2,966	7,536.00	377.00
11.	Hengduan Shan	4600 - 5500	1,680	1,617.62	106.99
12.	Himalaya	4300 - 6200	—	11,055.00	995.00
TOTAL				58,651.00	5,132.22

Note: Nyaiqentanglha includes glaciers of Kangri Garpo.

KANGRI GARPO RANGE

Most of the mountaineers, even though they are Himalayan experts, would – undoubtedly be unable to give correct answers to these questions: "Which glacier flows down to the lowest altitude in Tibet?" "Which glacier has the largest surface area also in Tibet?" The former is Ata Glacier (south) which is 14km in length, of which end reaches 2440m above sea level, and the

latter is Lhagu glacier which is 30km in length by 2 –5km width that reminds us of those in Patagonia and Alaska as well. The both glaciers are located in the eastern part of Kangri Garpo mountain range.

Geography and Glaciers

Kangri Garpo is a sizeable mountain range stretching 280km from northwest to southeast in N:28° 30' - 29° 60' and E:95° 30' - 97° 30'. It exists between Tsangpo Great Bend, the eastern end of Himalayas, and Baxoila Ling that is the western end of the Hengduan Mountains. Kenneth Mason described little about the mountains of East of the Himalayas, whilst Frank Kingdon-Ward specified the mountain in question to be in an extension of Sino Himalaya. On the contrary, however, the Chinese Academy of Science maintains their opinion that Kangri Garpo is to be defined as an independent range from a point of the view that the geographical structure has a similarity to that of Nyainqentanglha mountain range in the north of Kangri Garpo.

The range is encircled by three tributaries of the Tsangpo-Brahmaputra. The northern side is deeply eroded where Parlung Tsangpo, a tributary of the Tsangpo river forms a narrow and precipitous gorge in the valley. To the south and east of the range, the Lohit river (Chinese name is Zayul Qu) has an important role. The river separates into two tributaries, Kangrigarpo Qu (river) to the northwest and Sang Qu to the northeast. The confluence is in a small upper point at Samai in the Zayul County not far to the border with Arnachal Pradesh, India.

In the south of the range, Dihang River, a tributary of Brahmaputra is flowing in low level of 2000 - 3000m, and the mountain ridges do not exceed an altitude of 4000m which does not function as a climatic barrier effect. Therefore, Kangri Garpo, which constitutes the southernmost rim of Qinghai-Tibet Plateau, receives a direct humid southwest seasonal wind from the Indian Ocean. This causes much precipitation in the monsoon season and heavy snowfall in winter and spring. The north of the watershed has a complicated topography. The eastern end is a high plateau while to the west the valley of Parlung Tsangpo becomes a forested deep gorge. In the south the valley are extremely eroded. For at least three months a year villages are isolated from the outside world because of heavy snow.

In an area surrounding Ata Kang La and Lhagu Glacier, 61 glaciers are observed over 200 square km. The total surface area of all the glaciers in Kangri Garpo amounts to 1683 square km according to the survey conducted by China Academy of Science. The survey also indicates that Kangri Garpo is a mountain range where the ratio of glacial coverage is the largest in Tibet. In

Glaciers of Kangri Garpo Range

Name of glacier or location	Name of mountain (snow supply)	No. of glacier	Length of glacier (km ²)	Area of glacier (km ²)	Altitude of tongue (m)	Snow line (m)
(South of Songzong)	Kangrikabao peak 6,155m	-	-	-	-	4,300
Ata glacier	Ruoni Peak 6,882m	61	14(SE) 4(N)	More than 200	2,400(SE) 4,280(N)	4,600 - 5,000
Lhagu glacier	Three high peaks				3,900	
near Ata Kang La	-	3	2.5(NW) 6.0(SW) ?	-	4,460(NW) 3,680(SW) ?	
(Eastern end)	Geni Peak 6,150m	60	Max 7	200	3,600	
Total		-	-	1,683	-	4,300 - 5,000

particular, glaciers of Kangri Garpo are concentrated in the eastern part of the range.

■ History of Explorations

The first foreigner who traversed the Kangri Garpo and brought back information was an agent of the survey of India, a Pandit Kishen Singh, called A—K. When A—K left Zayul in July 1882 bound for Lhasa in the north, four years had already passed since he had departed from Darjeeling towards Lhasa on a secret mission towards the heart of Tibetan Plateau. The Pandit proceeded northwestwards up the valley of the Kangrigarpo Qu to the great range of Kangri Garpo, which he crossed over at Ata Kang La pass (4610m) He then came once more onto the elevated plateau of Tibet, where he noticed an impassable barrier to the oft-asserted flow of the Tsangpo river to the Irrawaddi river. This provided a significant hint in solving the problem of a missing link of the Tsangpo Great Bend. In 1911 F. M. Bailey got to Shugden Gumpa near Rawu Lake passing around the eastern corner of the range from Zayul on his way from Sichuan/Deep Gorge Country to Assam.

In February 1933 Kingdon-Ward set off from Sadiya in Assam with Ronald Kaulback and another companion. From Rima they followed A—K's route to Ata Kang La. Kingdon-Ward continued his way northwards to Shugden Gumpa and went further to the north to explore the upper Salween, whilst the other two returned from the pass. In this journey. Kingdon-Ward made a preliminary survey for the first time of the two major glaciers, Ata and Lhagu and recognized the highest peak, Chombo (Chinese name is Ruoni or Bairiga).

In 1935 R. Kaulback set out in quest of the undiscovered area in the upper Salween basin, accompanied by J. Hanbury-Tracy. They chose an approach through North Burma to Lohit river. After they entered the Lepa Chu valley and explored the eastern part of Kangri Garpo, Kaulback left Shugden Gumpa for Bomi along the Kangrigarpo river and Tracy for Bomi along Parlung Tsangpo. On the way Tracy entered into Midoi valley. They again joined together at Bomi to go on further north to the upper Salween. No official record of foreigners who have visited Kangri Garpo after 1936 would be available as the area has remained closed till recently.

Chinese Academy of Sciences carried out a series of scientific field surveys of the eastern part of the range in 1973, 76 and 80. Both Ata and Lhagu Glaciers were scaled. In 1989 and 90 they investigated Medoi valley in the central part of the range not far from Rawu.

■ Current Activities for Mountaineering

The five Japanese parties and one New Zealand team visited Kangri Garpo for reconnaissance in 1999 - 2002.

(1) May 1999 – T. Nakamura's party: The highest peak of Kangri Garpo

We entered Lhagu valley on May 17, 1999 and stationed overnight at a flat and low roofed one-story Tibetan house built of mud and stones (4060m). The village has 70 houses with 500 inhabitants. The caravan with four Tibetan muleteers and eight horses was organized here.

On May 18, the weather was completely fine. We set off towards the south following a good trade path that leads to Ata Kang La and down to Zayul through barley fields and then pastures in Lhagu valley. In both sides of the valley, various shape of glaciers came into sight, one hanging and the other flat. The highest peak of Kangri Garpo (6882m) appeared in full view in the

southwest at Kogin (4095m), a place for grazing animals in the valley. Southwards of Kogin the valley forms a small gorge. The path goes up the left bank about 2km and down to a widely opened riverbed called Chutsu (4185m), where we set up our base camp. Here is a 1.5m high enclosure made of shrubs which is used as a temporary shelter by villagers coming for pasturage or gathering caterpillar fungus (Medicinal herbs).

On May 19, having crossed a gentle saddle on the ridge behind base camp, we ascended to a spur on the other ridge further west. It was the best lookout point for an overall view of Ata Glacier (North). The principal supply source of a tremendous volume of snow on Ata Glacier is presumed to be the northern slope of the highest summit and adjacent high peaks ranging to the northwest. A mighty icefall descends from a gigantic snow plateau to a wide and flat saddle of 4600m from which two glaciers separate and flow down to south and north. Ata Glacier (South) has the most outstanding feature in Kangri Garpo. It has 700m icefall and a unique landscape of glacier streaming down through primeval forests, whilst Ata Glacier (North) flows down 4km from the wide and flat saddle of 1km by 2km. Its width is about 2km and inclination is very gentle. The terminus of the glacier is as high as 4280m and the end moraines foster two small infant lakes partly covered by floating ice.

(2) Sep. to Oct. 1999 – Gakushuin University: Kone Kangri of Kangri Garpo West

They made a reconnaissance of the second highest massif, Kangrigarporla Feng 6602m in Kangri Garpo West which is described in "Glaciers of Tibet" (Chinese Academy of Sciences). For the purpose they selected a Gone valley as an access route from a fertile village of Taba (3000m) of agriculture and forestry. The village is located on the left bank of Parlung Tsangpo 20km to the east from Sumzon between Bomi and Rawu. However, no 6602m peak was found but they came to know it must be a peak of 6347m (Russian map: 6260m) according to 1:50,000 map of China People's Liberation Army (PLA) that is most reliable. They named Kone Kangri for the said peak in consultation with China Mountaineering Association.

In two days caravan from Taba they ascended along Gone Qu to the end of Gone Glacier with a small lake called Gone Tso where they set up their base camp (4000m). Taba villagers come here to graze yaks in the summer. The landscape of pastures along the way is as beautiful as a photograph. The overall length of Gone Glacier is approx. 12km and the glacier head reaches a saddle of 5500m. Unfortunately Kone Kangri was hidden from sight because of bad weather.

(3) Oct. to Nov. 2000 – Silver Turtle party: Lhagu Glacier of Kangri Garpo East

They arrived at Rawu on October 21 via Nagqu, Qamdo and Baxioi, and established their base camp (3955m) near Lhagu Glacier terminal. The route taken to enter onto Lhagu Glacier was along a yak trail from Lhagu village passing above the western bank of Lake Lhagu and then Lhagu Glacier. The terminus of the glacier provided no viable access because of many crevasses. Camp 1 was set up at 4115m. On October 23 they followed a yak trail to a small pasture at the junction with a branch glacier going up to the ridge dividing Lhagu and Ata Glaciers. They further proceeded along a yak trail and made Camp 2 (4392m) on the southern rim of Lhagu Glacier 10km north of the glacier end. The weather was not stable and sometimes it was blowing with snow.

On October 25 they spent one day to ascend Lhagu Glacier for about 2km. The conditions were even worse. On the following day they returned to the pasture at the junction with the branch

glacier where Camp 3 was set up. On October 27 they climbed up to a point of 5200m near the ridge dividing Lhagu and Ata Glaciers following the branch glacier in order to take a bird's-eye view of Lhagu Glacier for reconnaissance and returned to Camp 2 the next day. October 27 was again a day with blowing snow. On October 30 they traversed Lhagu Glacier from Camp 2 to Camp 4 on the glacier at 4470m one km from the left bank of Lhagu Glacier. On November 1, from Camp 4 they ascended a contact line with the left (north) bank of the glacier to an altitude of 4590m which was the highest point they could reach on Lhagu Glacier.

(4) Oct. to Nov. 2001 — Silver Turtle party: Lhagu Glacier and Ata Kang La

They again visited Lhagu Glacier and then went to Ata Kang La and descended to Zayul side to north for a while. They could have a complete view of the eastern side of Ruoni 6882m.

(5) Oct. to Nov. 2001 — New Zealand party headed by John Nankervis: Lhagu Glacier

Eight members visited Lhagu Glacier to climb some peaks that surround the glacier. They investigated the glacier extensively, but climbing itself was not successful.

(6) Oct. 2002 — Kobe University Alpine Club: Reconnaissance of Ruoni 6882m

The Alpine Club of Kobe University obtained a permit from the China Mountaineering Association (CMA) to climb the highest peak in Kangri Garpo in the fall of 2003. In October 2002, they sent a reconnaissance party to search for and find a viable climbing route to the summit. Three members arrived at Lhagu village on the 8th, entered the valley to the south and set up base camp on the bank of Hyuna lake north of Ata Glacier (North). They ascended the glacier and reached 4650m point.

■ Name and Height of the Highest Peaks

- a. China People's Liberation Army (PLA map) -----6882m Bairiga (or Kangri Ga)
- b. "Glacier of Tibet" (Chinese Academy of Science) -----6610m Ruoni
- c. - do - , attached map -----6800m no name
- d. Map of Zayul County, 1:300,000 -----6882m Bairiga (or Kangri Ga)
- e. Russian Topographical Map, 1:100,000 -----6805m no name
- f. - do - 1:500,000- -----6970m no name
- g. "Plant Hunter in Tibet" Kingdon-Ward 1933 (map) -----6700m Chombo
- h. "Salween" Ronald Kaulback 1935 (map) -----6450m no name
- i. TPC (Defense Mapping Agency map) 1:500,000 -----6335m no name
- j. AMS China, 1:250,000 -----6614m Chomo

As the PLA maps are those made by the Chinese authority, 6882m should be recognized as the actual altitude of the highest peak Ruoni (or Bairiga) in Kangri Garpo.

The Chinese Academy of Sciences dispatched a series of comprehensive scientific expeditions to the Qinghai-Tibet Plateau after 1970. Since 1981, the survey team has shifted its principal research area to the Hengduan Mountains Region.

Geography of the Hengduan Mountains

The Hengduan Mountains are complicated in geological structure and active in new tectonic movements. They lie on the east flank of the juncture where south Asia and Eurasia are mounted. It is the transition region between the east zones encircling the Pacific and the west zones of ancient Mediterranean. The altitude of this area declines from northwest to southeast. Most parts of the area are characterized by a series of parallel mountain ranges and rivers from south to north, and with a sharp latitudinal differentiation.

Eastern Tibet, Western Sichuan and Western Yunnan, the area which lies approximately between longitudes 97° E - 105° E and latitude of 23° N - 33° N, can be treated as one unique geographic region characterized by formidable parallel high mountain ranges and deep gorges that are aligned stretching roughly north-south. It has a total area of about $4.2 \times 100,000\text{km}^2$. The Chinese name for this region is "Hengduan Shan" which means, "traverse cutting mountains". Early Chinese geographers explained that most of the mountain chains of Asia exhibit a predominant west-east trend; the system of the Hengduan Mountains is an exception because of its north-south trend.

These mountains form a considerable communication barrier between the people of the Tibetan Plateau and those of the Sichuan Basin. The barrier effect was especially prominent before the 1950s when travel depended entirely on tortuous mountain trails and rope bridges or iron suspension bridges.

From a geographical point of view, the name of Hengduan Shan is particularly appropriate to that section known as the "Three River Gorges Country" on the frontier between Tibet, Sichuan and Yunnan with its very distinctive arcuate structural frame. This coincides geomorphically with the area of parallel ridges which separate the three mighty rivers - Salween (Nujiang), Mekong (Lancangjiang) and River of Golden Sand (Jinshajiang)- that represents the upper reaches of Yangtze (Changjiang). This remarkable structural and morphologic characteristics may be unique in terms of large scale geological systems as well as the river patterns of the world.

However, topographically, the area from the River of Golden Sand to the east, western Sichuan which is occupied by the drainage basins of Yalong and Dadu Rivers, the tributaries of River of Golden Sand, and further east to Min River, are usually described separately as a geomorphological region called the "West Sichuan Highland". This area also shares the same landscape characteristics as the river gorge country. Nevertheless, it possesses a little different geological history and fundamental structure. Broad topographical similarity is the basis for the traditional concept of the Hengduan Mountains and for the inclusion of the geographical region including "Three River Area" (geologically) and the "West Sichuan Highland", as the eastern margin of the Tibetan Plateau.

In general, most mountain chains of the Hengduan region correspond to the geological structure

emphasized especially by the ranges and gorges of the landscape. Except for the upper reaches of the three main rivers, rugged mountains of very pronounced relief characterize most parts of the gorge area, with valley flood level to ridge crest elevations ranging from 800 - 1,000m in the north and 1,500 - 2,500m or more in the south. Western Sichuan and the adjacent areas of northern Yunnan to the south are characterized by much more varied topography. The plateau-type landforms are sustained extensively and stretch northward to unite with the Tibetan Plateau proper. Many of the highest peaks of this area exceed 6,000m, the most conspicuous massif is the Minya-Konka 7,556m (Gongga Shan).

Because of its topographical situation as the eastern dissected rim of the Tibetan plateau, the Hengduan region is climatologically a transitional zone between the lowland tropical and subtropical climate in the southeast, to the highland climate of the plateau itself in the northwest. The Hengduan region correspondingly displays a wide variety of mountain topoclimate, but all are mainly influenced by the southwest Asian monsoonal rhythm which is known to be characterized by the seasonal alternation of wind systems. A recent study has suggested that the Tibetan Plateau has its own permanent pressure system which is also marked by changes in the prevailing wind direction between winter and summer. This has been described as an independent plateau monsoon system. This system dominates the weather and climate of the plateau proper and may cause some deviation from average Asiatic monsoon conditions in the adjacent areas including the Hengduang Mountains. The complex local patterns of mountain climate make the Hengduang region difficult to present any systematic regionalization. Nevertheless the well-marked horizontal zonation in temperature associated with the other climate characteristics allows the Hengduan

Table 1 Glaciers of each range in the Hengduan Mountains Region

Name of range	Altitude of the highest peak in the range (m)	No. of glacier	Area of glacier (km ²)	Volume of glacier ice (km ³)	Mean area of each glacier (km ²)	Snow line (m)
Dandalika Shan	5,406	33	13.94	0.5273	0.42	4,720-4,920
Baxoila Ling-Gaoligong Shan	6,146	849	902.79	51.6229	1.06	4,680-5,440
Yonglongli Nanshan	5,951	115	38.36	1.1853	0.33	5,040-5,280
Tiantaweng Shan-Nu Shan	6,740	346	332.07	21.1744	0.96	4,700-5,420
Ninching Shan-Yunling	5,752	21	12.08	0.4940	0.58	5,000-5,200
Chola Shan-Shaluli Shan	6,204	264	233.04	13.1698	0.88	4,620-5,280
Daxue Shan	7,556	195	388.88	28.1904	1.74	4,660-5,400
Qionglai Shan	6,250	98	38.21	1.2061	0.39	4,920-4,960
Min Shan	5,588	8	2.64	0.0731	0.33	4,700
Total		1,929	1,912.01	117.6433	0.99	

Supplements: Meilixue Shan 48 glaciers 151.6km²

Minya konka 71 glaciers 297.5km²

Table 2 Glaciers of each river system in the Hengduan Mountains Region

Name of River	No. of glacier	Area of glacier (km ²)	Volume of glacier ice (km ³)	Mean area of each glacier (km ²)	Snow line
Lohit (Zayul Qu)	297	449.55	27.7967	1.51	4,700-5,440
Salween (Nujiang)	860	667.72	36.3027	0.78	4,680-5,440
Mekong (Lancangjiang)	198	177.18	10.7282	0.89	4,600-5,160
Golden Sand (Jinshajiang)	179	150.30	7.7562	0.84	4,600-5,160
Yalung (Yalongjiang)	150	129.93	7.4442	0.87	4,620-5,280
Min (Minjiang)	244	337.18	27.6133	1.38	4,560-5,400
Jialing (Jialingjiang)	1	0.15	0.0023	0.15	4,660-5,240
Total	1,929	1,912.01	117.6433	0.99	

Mountains to be divided into seven climatic regions.

Glaciers of the Hengduan Mountains

Many of the ranges in the Hengduan Mountains are above 5,000 - 6,000m a.s.l (above sea level). As a result, many glaciers have developed around peaks and ridges. It is the southernmost and easternmost glacier region in China. For the screen effect of high ranges and corridor effect of deep valleys, the precipitation decreases from the east and the west to the central, and decreases northwards. Based on estimation of field observation, the annual precipitation and the annual mean air temperature are 2,000mm and $-3.3 - -4.7^{\circ}\text{C}$ respectively at the snowline (4,800-5,000m a.s.l.) of glaciers in the Yulong Mountain; and 1,700-1,850mm, $-4.3 - -5.5^{\circ}\text{C}$ at the snowline (4,800-5,200m a.s.l.) on the west slope the Minya Konka (Gongga Shan), 1,350mm and -5.7°C at the snowline (5,000m a.s.l.) in the Xuebaoding Mountain and 1,500mm, $-4.0 - -6.8^{\circ}\text{C}$ at the snowline (4,800-5,200m a.s.l.) in the Meili Xueshan (Kang Karpo or Kawagebo).

There are 1,929 glaciers with a total area of 1,912.01km. In general, the snowline is between 4,800m a.s.l. and 5,200m a.s.l. in the Hengduan Mountains. Almost all types of glaciers find their way in this region, most of which are small and medium glaciers. The number of hanging glaciers, cirque glaciers and cirque-hanging glaciers occupies 87% of the total number of glaciers, and large glaciers are only 6% of the total number while their coverage is 27.7% of the total area. From the viewpoint of glacier physics, these glaciers belong to oceanic type in the southern part of this region and continental type in northern or northwestern part. The oceanic type is characterized by the fast reaction to climate fluctuation and instability. Reference is made to the table 1 and 2.



1) Peaks and Gorge Country - Three Rivers Region

"Where in all the world is to be found scenery comparable to that which awaits the explorer and photographer in northwestern Yunnan Province, China and in the vastness of Tsarung, in southeastern Tibet?"

Few have been privileged to climb the towering ranges separating the mightiest stream of China. The whole region, so geologists tell us, was once one vast, high plateau, now intersected and eroded by some of the longest rivers in the world." (National Geographic Magazine, August 1926).

1) Hkakabo Razi (North Myanmar) : Rohit-Irrawaddy Divide

The Irrawaddy and its tributaries have their sources in the mountain range (Chinese name: Dandalika Shan) that spreads over 200km along the border of China, Myanmar and India. There are two peaks higher than 5,800m which includes Hkakabo Razi, 5,881m, the highest mountain in Myanmar. There are many small glaciers and snow beds. Hkakabo Razi was first discovered and its height measured by an Indian surveyor in 1923. In 1931 Kingdon-Ward tried an access to the mountain from the Burmese side and in 1937 he reached the upper Adung valley to find climbing routes.

In September 1996 Takashi Ozaki made the first ascent of Hkakabo Razi. The route taken is on the northeastern side of the mountain along the upper Adung valley. The footpath was not maintained.

2) Baxoila-Gaoligong Ranges: Lohit/Irrawaddy-Salween Divide

The western divide of the Salween River is topographically complicated. The two rivers Irrawaddy and Lohit have their source in the divide of the Salween. The Chinese Academy of Sciences specifies the mountain ranges as follows:

- (1) Baxoila Ling range-Lohit/Irrawaddy (north)-Salween divide
- (2) Gaoligong Shan range-Irrawaddy (south)-Salween divide

The Baxoila Ling range has many unknown 6,000m peaks and no climbing attempt has yet been made as of today. The outstanding 6,000m peaks are Pk 6,005m, Pk 6,146m and Yangbayisum 6,005m from south to north. The writer was able to take photographs of Pk 6,005m and Pk 6,146m in 1996 on the way of circumnavigation of the pilgrimage around Meili Xueshan (Kang Karpo).

The area from Baxoila Ling to the Salween-Mekong divide is called Tsawarong, the Heart of the Deep Gorge Country, which has long had a small group of people isolated. Gaoligong Shan range of 250km starts from the Yunnan-Tibet border and extends southwards along the Yunnan-Myanmar border. An altitude of the mountains is at a level of 4,000m and has no value for mountaineering except one glaciated 5,000m peak that stands to the north of Gongshan.

The said peak, which the local people call Kawakabu (in Tibetan) is assumed to be the same as Keni Chun Pu, which was described by Kingdon-Ward and J.F. Rock. Kingdon-Ward saw this mountain in 1911. He had plotted Ke-ni-chunpu (over 6666m) on the map of "The Land of the Blue Poppy". Photographs taken by Rock in 1923 and by the writer in 1996 can identify the profile. The Yunnan Provincial survey team measured the altitude as 5,128m.

3) Damyon and Meili Xueshan: Salween-Mekong Divide

The Salween-Mekong divide in the Hengduan Mountains region stretches over 700km from the Tibetan Plateau to the south. Two names are given from north to south.

- (1) Taniantaweng Shan range
- (2) Nu Shan range

Damyon and Dungri Garpo

The Sichuan-Tibet Highway that passes through the southern rim of the Tibetan Plateau crosses the southern part of the Taniantaweng range at Tungda La 5,008m. To the north of the high pass there are no prominent peaks that exceed 6,000m, whilst to the south soars Damyon, a sizeable mountain massif having two 6,000m peaks.

Kingdon-Ward first called this mountain "Ta-miu" during his journey in 1911. He witnessed the sharp and attractive twin crystal peaks of the Damyon massif from Wi-chu in 1913. The writer also had a glimpse of them from the same direction in 1996 and 1997. Kingdon-Ward tried to ascend one of the southernmost peaks from Yanjing (Yakalo) and reached a point of 5170m in 1922, where he found a number of dead glaciers.

Damyon is a sacred mountain for local Tibetan people. A whole panorama of the eastern side can be seen at the point where Yunnan-Tibet Highway passes over Mekong-Yangtze divide. The mountain massif also has many lofty rock peaks but the glaciers are not much developed and are retreating. The Chinese map indicates two 6000m peaks, one is Dungri Garpo 6090m and the other is Damyon 6324m which is the highest in the massif. All the peaks remain untouched.

Meili Xueshan

Meili Xueshan (Ka-Kar-Po, Kang Karpo or Moirigkawagarbo) is located at 98.6° E and 28.4° N and is engulfed by over 20 peaks covered by snow all year around, six of which exceed 6000m. Meili Xueshan is topographically higher in the north and lower in the south. Its river valley is so widely open in the south that an air current can go up along the valley. As a result, the Meili Xueshan area is under the strong effect of the monsoon and there is a marked difference between the dry and humid seasons. In addition, the high and steep mountains help to produce perpendicular climatic belts with utterly different features. Above the snowline of 4000m the tall snow peaks shine white; in the valley, the glaciers extend up to dozens of kilometers. The glaciers around the highest peak were first explored by Kingdon-Ward in 1913. Below the snowline, dense alpine shrubs and coniferous forests blanket the mountain slopes on both sides of the glaciers.

Meili Xueshan has drawn significant attention from the mountaineers, thanks to Japanese and American attempts.

The first to have attempted the highest peak "Kawagebo" 6,740m was a Japanese party, the Joetsu Alpine Club in 1987, followed by the Academic Alpine Club of Kyoto University (AACK). AACK made a reconnaissance on both sides of the watershed and challenged from the eastern side in a joint party with China in 1990-91. In January 1991, an awful tragedy took place. An unexpectedly violent snow avalanche struck the allied mountaineering team at night. The campsite vanished without a trace. All 17 mountaineers were killed. AACK again challenged the peak from November to December 1996, but in spite of the good weather conditions they were not successful. Meanwhile, American parties led by Nicholas B. Clinch visited the mountains four times in 1988, 89, 92 and 93. They attempted Peak 6379m but gave up due to dangerous snow conditions, and then focused on Pk 6509, the second highest peak in the massif. In 1992 and 93 the Americans made attempts on Pk 6509 from the northwestern side but were unsuccessful due to bad snow conditions, then heavy precipitation in 1992, and dangers of avalanches and overhanging cornices in 1993.

4) Baimang Shan: Mekong-Yangtze Divide

The Mekong-Yangtze (River of Golden Sand) divide has three sections of ranges in its name, from north to south, Markam Shan range, Ninching Shan range and Yunling range. Markam Shan, having no particular snow peaks, lies to the north of Sichuan-Tibet Highway, to the south of which the range continues to Ninching Shan where there still remains an old four-sided stone pillar having been erected in 1728 that showed the boundary of China and Tibet. Ninching Shan was a crossing of "the Marches of Mantzu".

To the north of Baimang Shan (Paima Shan) pass 4292m near Deqen, the topography is much complicated where there are two groups of Jiazi snow mountains and Tza-Leh snow mountains. Both groups have a number of 5000m peaks. The mountain ridges composed of thousands of rock pillars and pinnacles are so arid and desolate that they are likely to be gigantic tombs of limestone rocks.

To the south of the pass there exists the well-known Baimang Shan that appeared frequently in explorers' journals. The highest peak, Zhalachoni Feng, 5,429m, being snow-clad with glaciers remains unclimbed.

5) Yulong Xueshan and Haba Xueshan: across Yangtze Great Bend

The river of Golden Sand, main stream of Yangtze (Chinese name: Jinsha Jiang) coming down southwards from the Tibet Plateau along the border of Sichuan and Yunnan Provinces changes its streams turning abruptly 110° degree to northeastwards at Changjiang (Yangtze.) First Bend flows into the world famous Tiger Leap Gorge where tremendously large amount of water rages down through the narrowest passage of only 30-60m. In the both sides of the gorge huge mountain walls and ridges precipitously drop down onto the banks. The mountains are Yulong Xueshan to the east and Haba Xueshan to the west.

Yulong Xueshan 5596m that is called as "Jade Dragon Mountain" is at the southern end of Yulong Xueshan range in Lijiang district of Yunnan Province. Running from north to south it is some 34km long and 13km wide. There are 18 towering peaks which are over 5000m. The main peak of 5596m, Shanzidou, lies at 100.1° E and 27.0° N. In 1987 Americans made the first ascent of the main peak from the eastern side. They selected the shortest route, which was threaded through rock bands and gullies to the diagonal snow couloirs on the upper ridge.

To the west of the Tiger Leap Gorge, Haba Xueshan, 5396m, rises 3500m directly above the riverbed, and further northwestwards several small groups of unique rock peaks of some 4700m surround Zhongdian plateau. Haba Xueshan was first climbed by a Chinese party in 1995. Zhongdian is now a place for tourists called "Shangri-La".

2 West Sichuan Highland - Yangtze River Basin

Unlike the southeast Tibet, where almost all the 6000m peaks remain untrodden, in Sichuan there are only a couple of unclimbed peaks exceeding 6000m. Nevertheless, countless alluring rock and snow peaks of 5000m to 6000m are awaiting visits of climbers and trekkers. This article describes an outline of the major mountain ranges and massifs in the eastern part of the Hengduan Mountains between Jingsha Jiang (River of Golden Sand) and Min Jiang of the Upper Yangtze River. Unless otherwise specifically mentioned, all the peaks are considered unclimbed.

1) Chola Shan Range

Towering at the southern fringe of Qinghai-Tibet Plateau, Chola Shan ranges from northwest to southeast in the northern part of the Hengduan Mountains. It is linked up with Mola Shan in the north and joins Shaluli Shan in the south. With a large complex terrain of rock and snow peaks, Chola Shan range has a lofty and magnificent main peak of 6168m at 99.1° E and 31.8° N and the second highest peak of 6119m, 3km far from the main summit to the west, and has several dozen of snowy peaks exceeding 5000m. In September 1988, the main summit was first ascended by the joint expedition team of Kobe University and Geological University of China. They took their route up on the eastern glacier from the base camp at Lake Xingluhai. Some of 5000m peaks were climbed by UIAA team in September, 1997. Chola II, 6119m was first climbed by an American solo climber, Charlie Fowler in 1997.

2) Shaluli Shan Range

This mountain range covers a vast area and there is no clear boundary between Shaluli Shan and the other ranges. Each massif is introduced in succession from north to south.

(1) Gangga Massif

This massif stretches to the southeast from the end of Chola Shan, south of Yalong Jiang. The main peak, Gangga (5688m), and other 5000m peaks have small glaciers. Nobody has attempted climbs.

(2) Jarjinjabo Massif

The highest peak is 5812m and the second highest is 5725m. The most impressive peak is a granite rock tower (5382m) soaring to the sky like a small Fitz Roy in Patagonia. These mountains are located along the northern rim of the wide Zhopu Pasture north of Xiashe (5833m) Massif. To the west there are several 5500m peaks and to the east the challenging fortress of Hati (5524m) rises proudly. The granite rock tower (5382m) was first climbed by a Japanese party in end July, 2001 and by a American party in August, 2002.

(3) Xiashe Massif

Xiashe (5833m), the highest peak, has beautiful lakes on its southern side. The north face seems to attract climbers. The massif also has 5500m-5600m peaks adjacent to the Sichuan-Tibet Highway.

(4) Dangchezhengla and Yangmolong Massif

This massif is situated 15-20km away from Batang to the east. There is a short and easy access to base camp. Four principal peaks of 6060m (Yangmolong), 6033m, 5833m (Dangchezhengla) and 5850m dominate, ranging from east to west. A Japanese party attempted the highest peak from the northern side in 1991, but they were unsuccessful due to bad weather and danger of avalanches. Since then no one has attempted the highest peak. On the southern side of the massif a heaven lake called Yamochoken lies at an altitude of 4800m. Dangchezhengla was first climbed by a Japanese party of the Hengduan Mountains Club on June 17, 2002.

(5) Genyen Massif and neighbouring mountains to the north and northwest

To the south of the Sichuan-Tibet Highway, between Litang Plateau and Batang, lies a vast mountain area. The highest peak, Genyen (6204m), a divine mountain situated at 99.6° E and 29.8° N, was climbed by a Japanese party in 1988. However, more than ten peaks of rock and snow over 5800m are awaiting climbers. In particular, a 5965m peak, towering like a sharp beak, looks magnificent, and the scenery surrounding the Rengo Monastery with 600 years history amid spiky rock pinnacles is really enchanting.

In 1877, William Gill had a glorious view of the mountains 20,500 feet. He wrote in his narrative ("The River of Golden Sand") that "No word can describe the majestic grandeur of that mighty peak..... The traveler can appreciate the feelings of the Tibetans that have led them to call it Nen-Da, or The Sacred Mountain." In 1879, a Hungarian count, Bela Szechenyi and Gustav Kreitner had a view of the mountain and described the name as Kangboune and the altitude as high as 8100m.

(6) Gongga Xueshan (Kongkaling) Massif

These mountains with three high snow peaks are located in the boundary of Muli County and Daocheng County, that is the southern end of Shaluli Shan range. They are well known among the Tibetan people as the Heavenly Charmes in the Snow World. The highest north peak, Xiannairi

6032m lying at 100.3° E and 28.4° N means Mother Buddha; Yangmaiyong, the south peak 5958m means Manjuist Buddha; Xiaruoduoji 5958m means the Buddha with warriors' hands. According to a legend these names were conferred by Dalai V.

The long-time erosion and corrosion leave the rocks of peak ridges exposed, tooth-shaped, bolt-shaped or make them become precipices. At the lower reaches of the peaks, the densely scattered lakes and swamps moisten the vast expanse of fertile farmland and pasture.

J.F. Rock visited this mountain in 1928 and took a beautiful photograph of Yangmaiyong (He described as "Jambeyang") which appeared in National Geographic Magazine. In 1989, HAJ sent a climbing expedition. They were defeated due to bad weather. In 1993, American came but could make only a trekking around the mountains. In 2001, an American party attempted Xiaruoduoji but was not successful. Now Daocheng County government is strictly controlling a permit for climbing.

3) Gongkala Shan Range

This is a small mountain range located 30km away from Garze to the southeast. In 1998 a Japanese party made a reconnaissance from the south of the highest peak, Kawarani (5992m), and the second highest one, Peak 5928m. According to the topographical map of the China People's Liberation Army (1:100,000), there seem to be well-developed glaciers on the northern side. No other record is available.

4) Daxueshan Range

This range has the most famous mountains, including Minya Konka 7556m (Gonnga Shan). The Tibet-Qinghai Plateau ends at Daxue Shan. The scope of the range is rather ambiguous. Each massif is described from north to south.

(1) Haizi Shan - 'Ja-ra'

Tibetans called Haizi Shan (5820m) as 'Ja-ra' to signify 'King of Mountains' and many explores have noticed this outstanding peak. A good close-up view of the southwest side can be had from the Sichuan-Tibet Highway. The north face would provide a possible climbing route.

(2) Mountains of Dadu River basin

Along the deep valley of Dadu He, one of the large tributaries of the Yangtze River, there exist many 5000m peaks both to the east and west. The highest is a 5712m peak on the left bank of the river. The eastern end shares a boundary with the Jiaojin Shan, minor range, and the Qionglai Shan ranges.

(3) Cheto Shan

This is a minor mountain with the highest peak, 4962m, located between Haizi Shan and Minya Konka.

(4) Lotus Flower Mountains

Although no glaciers have developed, eminent rock peaks can be seen north of Kangding, the capital of the Garze Tibetan Autonomous Prefecture. A Japanese party climbed the highest peak, 5704m, in 1998.

(5) Lamo-she Massif

This massif, east of Kangding, has been called the 'Mountains of Tachienlu'. In 1993 its highest peak, Lamo-she (Tianhaizi Shan, 6070m) was scaled by Americans and the fourth highest (Shehaizi Shan, 5878m) was climbed by an American-Canadian-NZ team. The other two peaks of 5924m (Baihaizi Shan) and 5880m are guarded with rocks and hanging glaciers.

(6) Minya Konka (Gongga Shan, 7556m) and its Satellite Peaks

Minya Konka or Gongga Shan in Chinese is the highest peak in the Hengduan Mountains. Minya Konka, which means "the Highest Snowy Mountain" in Tibetan, is located in at the middle section of Daxue Shan to the north of Lamo-she. The massif covers some 60km from south to north and 30km from east to west and has the main peak 7556m at 101.8° E and 29.6° N.

The frequent geological movement in the Minya Konka area has brought about a lot of folds and fractures. As the mountain rises, valleys are formed with a height difference of 5000m on the east and west slopes. Teamed with more than 20 neighboring satellite peaks exceeding 6000m, it has a total area of 290km² with 45 glaciers, mainly valley type glaciers though there are hanging glaciers in some places. Five glaciers have lengths of about 10km each, the longest being Hailuogou (Conck Ditch) Glacier that has a great wide ice fall more than 1000m long whose glacial tongue goes down to 2600m because of the climate conditions and violent glacial movement.

The four main ridges (NW, NE, SW and SE ridge) stand on the magnificent pyramid, the main summit of Minya Konka. As the rocks are chiefly composed of granite and due to the long-time effect of ice corrosion and cutting, there appear narrow knife ridges and precipitous ice and rock buttresses.

The mountain area has of three climatic zones of the highlands, and temperate and subtropical. The climate undergoes great changes, the rainy season is from June to October and the dry season from November to May.

All the ascents of Minya Konka, from the first ascent by American in 1932 to the sixth ascent by Japanese in 1997, were made via the northwest ridge. In 1998, however, a Korean party made the 7th ascent via the northeast ridge, which had taken the lives of 12 Japanese climbers in three expeditions. Remaining problems are the difficult south ridge and southwest ridge.

A brief chronicle of the climbs and explorations is given hereunder-

1877	W. Gill	Described Riuchi-Konka (Satellite peak)
1879	B. Szechenyi	Computed height 7600. (24,963 ft.)
1890	A.E. Pratt	Entered eastern valley and Lamo-she
1911	F.M. Bailey	Entered eastern valley for Takin
1923	T. Roosevelt	Measured height 10,000m ?
1929	H. Stevens	Made valuable sketches
1929	J. Rock	Surveyed and photographed western side widely
1930	Imhof	Researched Minya Konka and Lamo-she
1930/31	A. Heim	Researched glaciers and geography
1932	R. Burdsall, etc.	First ascent of main peak via NW ridge
1957	Chinese	Second ascent of main peak via NW ridge
1980	American	Attempted south and north side, defeated

1981	Japanese	Attempted NE ridge, defeated, 7 killed
“	Swiss	First ascent of Zhong Shan 6886m, 6652m, Taishan 6410m, and other three 6000m peaks
“	British	First ascent of Riuchi Konka 5928m
1982	American	First ascent of Jaizi peak 6540m
“	Japanese	Attempted NE ridge, defeated, 1 killed
“	Swiss	3rd ascent of main peak via NW ridge
“	American	4th ascent of main peak via NW ridge
1984	German	5th ascent of main peak via NW ridge
1985	Hong Kong	Attempted NW ridge, defeated
1989	French	Attempted NW ridge, defeated
1990	Japanese	Attempted NW ridge, defeated
1991	“	Attempted NE ridge, defeated
“	American	Attempted NW face of Tuparu, 5464m, defeated
1994	Japanese	Attempted NE ridge, defeated, 4 killed
1997	Japanese	6th ascent of main peak via NW ridge
1998	Korean	7th ascent of main peak via NE ridge (First ascent of NE ridge)
1999	Japanese	First ascent of Reddomain 6112m
2002	French	8th ascent of main peak via NW ridge

There still remain unclimbed satellite peaks over 6000m. The following list shows the most important peaks still to be challenged:

Northern part	Grosvenor	6376m
	Mt. Edger	6618m (E-Gonnga)
Central part	Daddomain	6380m
	Longemain	6294m
Southern part	Longshan	6684m
	Nyambo Konka	6144m

(7) 6079m Massif

This is an independent massif with an unclimbed 6000m peak in the vicinity of Minya Konka to the south, though it is not a large scale. No one has yet made a reconnaissance of the highest peak at 6079m. Farther to the south, a 5584m mountain is shown on the Chinese map, but no specific information is available.

5) Qionglai Shan Range

To the east of the deep canyon of Dadu river lies Jiaojing mountain which is famous for the historical place of "Crossing Daxue Shan" where the Red Army soldiers were confronted with and overcame difficulties on the way of Long March. There are several snow peaks over 5000m, but detail information is awaited. Farther to the northeast of Jiaojing mountain, Qionglai Shan runs from south to north. Siguniang Shan (Mt. Siguniang) is located in the middle section of Qionglai Shan, which is in the joint with the western fringe of Sichuan Basin. In the vicinity and in the area to further north a number of untrdden 5000m snow and rock peaks, amongst which there are

many peaks exceeding 5500m with small glaciers and lakes.

To the east of Qionglai Shan, lies a small range, named Yanggong Shan, located at 102° E and 32° N. the highest peak of which is 5273m and was first ascended by a Japanese party from the eastern glaciers in 1991.

(1) Mt. Siguniang

Siguniang Shan is (Four girls mounting) is also respected by local Tibetan as a holy mountain. The legend says that four pretty and warm-hearted girls fought bravely with a ferocious leopard to save their treasured giant pandas and thus became four graceful mountains. Rising at 6250m, 5614m, 5454m and 5355m respectively, the four peaks stand in the common boundary of Xiaojing County and Wenchuan County. Yaomei Feng (peak of the youngest girl), the main peak 6250m at 102.9° E and 31.1° N. The perennial erosion has made up extremely steep walls and ridges. Plenty of glaciers hover in the air hanging on the south slopes. On the west and north slopes are awe-inspiring steep rocks of hundreds of meters in height.

A brief climbing chronicle is as follows: -

Siguniang 6250m had been climbed three times, all from the south. The first ascent was in 1981 by a Japanese team via East Ridge. It took 16 days and they used 2000m fixed rope. The second ascent also by the Japanese in 1992 took 23 days via South Face using 600m fixed rope. The third ascent was made by an American climber Charlie Fowler who soloed a line between the two Japanese routes in 3 days.

The north face is extremely steep with smooth granite walls with intermittent ice streaks. It was first attempted on the right hand side in 1981 by an American team of Jack Trackle, Jim Donini, Kim Schmitz and Jim Kantzler. They reached 5000m after 11 days above their high camp, six days of which were spent on the final push. A Japanese team attempted the face but was unsuccessful. Little is known about their record.

The first ascent of the North Face of Siguniang was accomplished by Mick Fowler and Paul Ramsden over 6 days in April, 2002. A descent was made in two days down the unclimbed North Ridge. The weather was mixed with snow most days but a glorious, clear summit day. (Alpinist 1)

Difficulties ranged from grade VI rock to poor quality near vertical (Scottish VI) ice. The ice choked dyke section was about 750m long and contained several long vertical sections and two overhanging sections.

A particular difficulty was the lack of suitable bivouac ledges. The first five bivouacs were all hanging to some degree. On the second the weather conditions and lack of ledges meant that they could not get into their sleeping bags and so spent the night standing up with the tent over their heads. The route was climbed with natural protection. Bolts were not carried.

(2) Rock Peaks north of Siguniang

Mt. Siguniang, the highest peak of the Qionglai Mountains, has become so famous and popular that the southern side of the mountain, access to which is very easy from Chengdu, is now congested with hundreds of tourists and trekkers, domestic as well as foreign. However, if you were to look north you would note many lofty granite peaks towering toward the sky. These peaks, which range from 5300 to 5800m in height, encircle two beautiful valleys as if to form a grand coliseum. Approaches are not very difficult and a 1:50,000 Chinese topographical map indicates the relevant position and altitude in detail, the peaks remain little known - and in many cases,

untrodden.

A brief climbing history is as follows:-

- 1983 Celestial Peak 5413m (Tibetan name: Punyu, Chinese name: Mountain of Gods), the first ascent by American party led by Ted Vaill.
- 1985 Celestial Peak, the second ascent via a new route of the southeast ridge by Keith Brown (solo climb).
- 1994 Nameless 5383m peak west of Celestial Peak, the first ascent by Charlie Fowler (solo climb).
- 1994 Nameless 5484m peak and adjacent peak ranging to the east in the north of the main summit of Siguniang, the first ascent by Charlie Fowler (solo climb).
- 1997 Nameless 5666m peak north of the main summit of Siguniang, the first ascent by Charlie Fowler (solo climb).
- 1997 Rock tower southwest of Celestial Peak, the first ascent by John Mesler, 10 pitches, Grade 5.9.
- 2002 600m west face of Niuxim Shan 4942m, the first ascent by Naoki Ohuchi party.

Further north, there is an unknown massif of five 5000m peaks supposedly with small glaciers, of which the highest peak is 5527m.

6) Min Shan Range: Eastern End of Hengduan Mountains

To the east of the upper Min river lies the Min Shan range which is the eastern end of Hengduan Mountains running south to north in Songpan County. At 103.8° and 32.7° N, Xuebao Ding 5588m is listed as the highest peak of Min Shan, is located in the middle section of the range.

The main summit has many surrounding peaks such as Yuzhan Feng 5119m (the peak of jade hairpin) to the southwest, Sigenxiang Feng 5359m (the peak of four incenses) and the lesser Xuebao Ding of 5440m towering to the southeast. The major part of these peaks is composed of limestone rocks in the Carboniferous period. At around 4500m is the area of high mountains and grassy marshland while at less than 4000m are the dense and primeval forests and shrubs. This mountain area has giant pandas and golden monkeys. Besides, many alpine lakes are seen, and on the northern side sits the world famous Huanglong (Yellow Dragon) Scenic Spot that is worshipped as a "pond of precious jade" on account of its characteristic natural landscape.

The main peak was first climbed by HAJ party in August, 1986, and the second and the third ascents were made by the Japanese in 1991 and 1992 successively.

7) Beyond the Hengduan Mountains-Sichuan Basin

No snow mountains with glaciers exist in China to the east of the eastern fringe of the Hengduan Mountains where the fertile Sichuan Basin is situated.

In the southwest China, the Sichuan Province has a large expanse of Sichuan Basin and the West Sichuan Plateau. The Sichuan Basin has three parts - the west basin plain, the middle basin hills and the parallel mountain ranges and valleys of the eastern basin. There are no distinctive areas that invite mountaineers' interest.

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Each County of Yunnan, Sichuan Provinces and Tibetan Autonomous Region :-

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		1:400,000
	Administrative,	1:200,000
(2) Gongshan County	Topographical,	1:250,000
(3) Litang County	Topographical,	1:200,000
(4) Kanding County	Topographical,	1:200,000
(5) Xiaojing County	Topographical,	1:200,000
(6) Songpan County	Topographical,	1:200,000
(7) Luding County	Topographical,	1:200,000
(8) Bomi County	Topographical,	1:200,000
(9) Zayul County	Topographical,	1:250,000

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Map 1 inch — 2 miles and 1 inch — 4 miles of North Burma surveyed by British Government in 1942.

Three elderly members of The Japanese Alpine Club again visited the least-known parts of Nyainqentanglha East, Tibet, in April - May and October - November 2002. The party entered the unvisited glacial valleys with the objectives of firstly unveiling the northern side of the central part of the range and secondly reconnoitering the highest unclimbed peak, a holy mountain "Nenang" 6870m, and exploring unknown 6,000m peaks north of Bomi.

IN THE HEART OF THE EASTERN TIBET

Travel to less frequented regions in the Tibetan marches is always unpredictable even these days. We often encounter unexpected happenings and incidents on the way due to the problems of being granted a permit to restricted areas, unstable weather, dangerous roads, dreadful landslides, trouble with local people and lack of information. However, we do manage to come through the difficulties, keeping in mind "Anything can happen but nothing is impossible in China". An important key to success is the ability to cope with the situation in a flexible manner and to change the travel route without hesitation depending on the circumstances. We were forced to abandon our original plan to enter Yigong Tsangpo and to cross Shargung La on Tsangpo - Salween Divide to the north since a part of the gorges on the way was impassable.

Members of the Expedition: Tamotsu Nakamura (67 years old), Tsuyoshi Nagai (69), Eiichiro Kasai (60), Tashi (Tibetan guide, 28) and Tsering Zashi (Tibetan cook, 20)

■ To the central part of Nyainqentanglha East

On April 22: Chengdu - Lhasa . Tibet Mountaineering Association (TMA) welcomed us.

On April 24 to 26: Lhasa - Banda/Junction to Qamdo (Two Toyota Land-cruisers)

On April 27: Banda - Qamdo Airport - (four high passes) - Lhorong

The weather was unstable almost every day. The scenery suddenly changed. The western side of the watershed of Wi Qu and Nujiang (Salween) was forested. The road crossed four passes and descended precipitously to the river bank of Nujiang (Salween). We stood on Jiayu Bridge (3295) with heightened emotions as the bridge is a historical place where the old China Road "Gya Lam" from Peking to Lhasa crossed Salween River. Pandit A - K, dispatched by the Survey Department of India, reached this bridge on September 2, 1882. Immediately after the bridge, the road went along a deep gorge of a small tributary to the west along the old China Road till shortly the valley opened up. We passed through Kansa (4100), Old Lhorong where the ruins of a large monastery, which had been destroyed by the Red Army at the time of the Cultural Revolution, are strikingly dominant on the hill looking over Kansa village. After crossing the last pass (4500) we arrived at Lhorong (3680).

■ Sky Burial and to the Least-known Valley

April 28, fine then cloudy 8:00 5° (Centigrade). We visited the Zudo monastery of the Yellow Hat sect, which at present has 125 monks. One of the monks was kind enough to take us to the place of "Sky Burial" not far from Lhorong township. When we came to the place at about 11:00, the ceremony had already finished but a hundred vultures were still flocked there and in the sky too. The vultures were being fed with dumplings made of tsampa and smashed human bones.

April 29, fine 7:30 3°. The current road runs westwards from Lhorong to Pelbar (Pemba) almost along the old China Road, Gya Lam, in the northern foothills of the main Tsangpo-Salween Divide. We left Lhorong at 8:20. The weather was completely fair in the morning. Stopping at Shopando (3400), we asked villagers about the traffic southward to Bomi, but the trade footpath, which crosses a high pass over 5000m, was closed due to heavy snow. At 10:20 we crossed a pass (4440) and at noon again asked villagers in Parirang (4080) about the trail to Bomi. Their answer was the same. Nobody could cross Tunpla La (5262) down to Bomi because of snow in May but a three-days horse caravan would possibly carry us to Bomi between mid June and early October. Ronald Kaulback and John Hambury-Tracy crossed this pass in 1935.

We crossed the highest pass (4760) down to the village of Lhatse (4135), again crossed a pass (4490) and then entered a wide open riverbed in Puyu valley to the southwest. The road was only a vehicle track, which at times crossed river streams and was non-existent here and there. In the rainy season no vehicle would be able to drive up the valley because of the higher water levels of the streams.

After an hour's drive in the mist, one of Land-cruisers became stuck in the stream. It was like a sudden death. Villagers in the vicinity kindly worked till dark to pull out the car from the stream and a truck also came to help. In spite of the villagers' help, however, all the efforts were in vain. We pitched tents (4080) near the stream to spend the night. It was snowing all night.

April 30, rain after snow 8:30 0°. It continued to snow in the morning. 10 horses and eight porters from Shel Shep village came at 11:00. Leaving the car stuck in the stream we trekked up the valley and arrived at Shel Shep village (4110) at 14:30, where we lodged in the shed of a Tibetan house. Shel Shep is the last point that foreigners have ever visited and none of them has ever travelled further beyond. Many caterpillar fungi, which are an important source of the villagers' income, grow around there. One piece of good quality can cost five RMB(US\$0.60). Trees and bushes for fuel are abundant in the lower valley but they use yak dung for fuel in the upper pasture.

May 1, fine 7:30 minus 8°. Wonderful weather ! The magnificent snow peaks of Kona I, II, III appeared for the first time in the headwaters of the valley to the southwest. At 9:45 our caravan with 13 horses and nine porters departed from Shel Shep and marched up the right-bank of the wide open flat riverbed toward the headwaters. We soon passed nearby the primary school of Puyu village. The Puyu valley separates to two principal glacier valleys at the end. The left to the east is a glacier valley towards one of the most impressive peaks, Kongga (6488) and the right to the west is a valley towards Kona I, II and III exceeding 6300m. At about noon we set up our base camp - BC1 - (4180) at a point near the confluence of two streams beyond old glacier moraines and close to a stream flowing from the west valley. There are summer cottages for pasturage of Puyu villagers.

Quest for Peaks and Glaciers - Puyu Valley

In the afternoon of May 1 we entered the west valley and attempted to reach the ice falls in the lower part of the glacier surrounded by the three peaks of Kona. We trekked a yak trail from BC1 to the southwest along the right bank of an infant glacier lake, one-third of which was still frozen. Apparently the retreat of the glacier was forming the lake. The trail was exposed to frequent rock avalanches that fell down from precipitous slopes above the right bank of the lake, threatening us all the time. In an hour we reached the glacier tongue, and then ascended yak trails on the lowest part of glacier from the end, the surface of which was covered with debris. At 15:30 we got to the

foot (4300) of the icefalls and returned to BC1 at 17:30. The weather changed and it began to snow.

BC1 is at 30°40.266'N and 94°41.482'E. On both sides of the two valleys, west and east, a mark of erosion made by glaciers is clearly observed. The mark runs in ten to a hundred meters high strips along the foot of the mountain. It tells us of the retreat of the glaciers. Similar erosion is also seen in the Dam Dol valley. According to the Russian Topographical Map of 1:200,000 (hereinafter called as RTM), the glacier surrounded by Kona peaks has an overall length of about 8km from the farthest glacier head down to the glacier tongue. Beyond the watershed that the range of Kona and other 6000m peaks form, Qiaqing Glacier, the largest glacier in the basin of Yigong Tsangpo, 35km in length, flows down to the southeast.

On May 2, cloudy then fine after snowing 7:00 0°.

On May 3, snowing 7:00 0°. We entered the east valley traversing up and down yak trails on undulating old moraines covered with low conifer trees and shrubs to the flat riverbed. We went up to the glacier end where no glacier lake yet exists. The lower part of the glacier was covered with debris. We could have had a glimpse of the magnificent profile of Kongga (6488) if it had been fine. The upper north face of Kongga was beautifully adorned with precipitous Himalayan fluted ice and the summit ridge was guarded with huge overhanging cornices.

The sight of the east valley from BC1 is narrow, but RTM indicates that the glacier of the east valley separates to two streams at about 4km from the glacier end. The left one stretching to the east is the main stream, being about 6km long, whilst the right one going up southwards to the foot of the north face of Kongga and then to westwards is only 2km long. The glacier width is about 2km at the confluence where ice falls are viewed from Puyu valley. Behind Kongga to the east, a 6445m peak exists on the main watershed between Salween and Tsangpo according to the 1:100,000 topographical map of the China People's Liberation Army (hereinafter called the PLA map). But this peak cannot be seen, being hidden by Kongga. On the southern side of the watershed two glaciers flow down to Yigong Tsangpo. The one in the west is Ruoguo Glacier, 14km in length and the other in the east is Narong Glacier, 18km in length.

On May 4, cloudy 8:00 0°. Two Land-cruisers came to BC1 having been repaired in new Pelbar (Pemba).

On May 5, fine 8:00 minus 5°. We moved from BC1 to the new township of Pelbar county (3650). Surprisingly fresh winds were blowing in this most remote and isolated place located in the valley of a tributary of Salween River (Nu Jiang). It was experiencing a construction boom which the government policy of "Great Development of West China" is accelerating. Protection works in the form of a river wall were in full swing and many new houses were being built. Tibetan villagers of Puye were working there together with Chinese migrant workers. Recently a new road has connected Pelbar to Biru County in the upper Salween basin. Now we may drive from Pelbar to Lhasa via Nakchu in three days.

■ Quest for Peaks and Glaciers - Dam Dol Valley

On May 6, fine after cloudy weather 7:30 1°. We left Pelbar at 9:30 for Base Camp 2 -BC2. We drove back along the desolate valley. We again saw a Sky Burial site near old Pelbar (Pemba) village. Before reaching a high pass near Lhatsa we entered an open valley of Dam Dol where the Land-cruisers could pass. The topography and river conditions of the valley are very similar to Puya valley.

Having passed Dam Dol village on the left bank, we set up BC2 (4170) on a small pasture near

a confluence of the two streams, where Dam Dol valley separated to two glacier valleys. The west valley leads upwards to the southwest and the mighty white peaks of Chung Jung Tso (6204) massif soar in the glacier head. The east valley is to the southeast and a pair of enchanting peaks, Goyon I (6252) and II (6140), separates the glacier to the east and south. From BC2 directly to the south there is a view of beautiful Goyon II and prominent erosions by glaciers that resemble Puyu valley as if they were twins. All these peaks are ranging on Tsangpo-Salween Divide. The two glacier valleys have their infant glacier lakes in the course of formation.

The main glacier of the east valley flows down from southeast to northwest, and a branch glacier runs from the south and merges with the main glacier at a confluence about 6km from the glacier end. The main glacier is about 7km in length from the confluence to the glacier head, whilst the branch glacier is about 3.5km in length to the south. The main glacier has an overall length of 13km. Beyond the watershed to the south there is Maguolong Glacier, 14km long, that flows down to Yigong Tsanpo. Six 6000m peaks range on the Tsangpo-Salween Divide above both the glacier heads.

In the west valley the glacier flows down from southwest to northeast. It is about 4km from the glacier end to the confluence of two glaciers, one is to the south and the other is to the southwest. The former is about 4km to the glacier head and the latter is about 3km. Beyond the watershed to the south there is a branch glacier of Nalong Glacier and other nameless glaciers. Four 6000m peaks on the Tsangpo-Salween Divide encircle the glacier heads. Old moraines of the east valley reach a confluence of the two valleys and they block a stream from the west valley.

On May 7, fine 7:00 minus 6°. We left BC2 at 8:30 to reconnoiter the west valley. We trekked a yak trail along the left bank of the stream. On the way we had a wonderful view of Goyon I and II with a glacier lake to the southeast. In an hour we entered a wide open flat riverbed going beyond the moraines of the east valley. A panorama of snow-white glittering Chung Jung Tso (6204) massif suddenly came into sight. There was a small Tibetan village of only two houses. A Tibetan woman of the village kindly guided us to the upper glacier valley along a yak trail on the left bank making a detour to the upper pasture. At about noon we reached an ideal lookout point (4450). Chung Jung Tso and 6000m snow peaks ranging to west, a profile of the glacier flowing down in an S curve and an infant glacier partly covered with ice appeared in front of us. On the way back the villagers received us very warmly, offering yogurt and butter tea. A girl and young woman made themselves up painting colored dots on their faces. It began to snow at midnight.

On May 8, Cloudy after snowing 8:00 2°. We entered the east valley for the purpose of reconnaissance. A yak trail led us at first through the first moraines, a mark of erosion by the glacier and then up a slope of low conifer trees and shrubs along the right-bank. However, the trail became impassable due to a landslide at the point of 4400m that was a hundred meters high above the glacier tongue and lake. On the way back we visited the historical Dantseden Monastery, which had been destroyed at the time of the Cultural Revolution.

On May 9, fine 7:00 minus 4°. We departed from BC2 to Lhorong.

On May 12, cloudy 7:20 6°. We moved from Lhorong to Qamdo (3250). It took four days to drive some 1,100km from Qamdo to Lhasa via Sichuan-Tibet Highway (North) to Nakchu and then Qinghai-Tibet Highway to Lhasa. The road conditions of the northern route to Nakchu are worse than the southern route. We arrived at Lhasa on the afternoon of May 17.

The total expense per person - departing from/returning to Tokyo - was US\$8,255 which includes the return air fare from Tokyo-Lhasa, US\$2,000 for the fee for a permit to enter restricted and unopened areas of the three prefectures of Nakchu, Qamdo and Nyingchi.

HOLY MOUNTAIN & NORTH OF BOMI

Earlier snowfalls in East Tibet than those experienced during a normal year jeopardized our Original Autumn Plan 2002 with the ambitious objective of crossing the heart of Nyainqentanglha East from south to north: Jula - Punkar - High pass - Niwu Qu - Yigong Tsanpo - Xia Qu - Alando - Shargung La - Pelbar (Pemba). Nevertheless we were finally satisfied with a wonderful outcome. In Phase I, a complete profile of the veiled holy mountain Nenang 6870 was revealed from the south for the first time. We were able to reach the high pass to Niwu valley down to Yigong Tsanpo. In Phase II, Jalong glaciers and peaks in the upper valley of Botoi Tsangpo north of Bomi were explored for the first time.

Members of the Expedition: Tamotsu Nakamura (67 years old), Naomi Kawabata (65), Lenny Cheng (Chinese guide/cook, 47), Tashi (Tibetan guide, 28)

Phase I - Holy Mountain "Nenang" and March to Laqin La Holy Mountain "Nenang" Unveiled

On October 20: Chengdu - Lhasa. Mr. Dou Chang Shen of TMA welcomed us.

On October 22 to 23: Lhasa - Bayi - Jula (One Toyota Land-cruiser and one Pajero)

On October 24, fine 8:00 0° at Jula. We organized a caravan with three horses for riding, five yaks to ferry up the loads and five muleteers at Bela village a little north of Jula (3500) and departed for Nenang. The caravan passed through Sebu village (3630) and turned westwards to Renbu valley with beautiful gorges in dense conifer forest. We set up the first camp at a well maintained small pasture called Pama (3790), at a junction to Nenang valley. It was a very hard job to lead and manipulate yaks in a steep forested trail.

On October 25, cloudy 8:00 4°. We marched northwards up the trail through primeval forest on the right bank of Nenang valley. The valley has very narrow visibility as it is deeply eroded. We camped at 15:00 at comfortable Zhonggo pasture (4100), where we could catch a glimpse of the upper part of Nenang south face. According to our Tibetan muleteers we were the first foreigners to look upon their holy mountain Nenang. It snowed at midnight.

On October 26, fine after snow 8:00 minus 1°. A yak trail crossed the main stream to the left bank before a large waterfall and ascended in zigzags through steep conifer forest to a small pass. We stood on the pass (4210) at 10:00. With no prior warning a breathtakingly magnificent panorama of Nenang came into sight beyond two glacier lakes. The pass is an ideal lookout point. Below the treacherous ridge and the precipitous south face, guarded and beautifully adorned with fluted mixed ice, a harsh wave of glacier icefalls streamed down into the lake as if in the form of a huge white dragon. The sky was cobalt blue. A leader of the muleteers told us that we had good fortune as the God of Nenang would scarcely allow visitors to see the holy mountain. The muleteer explained that "Ne" meant holy thing, "nang" meant inside and therefore "Nenang" was interpreted as a holy mountain hidden inside of the valley. After two hours we descended to Pama pasture.

On October 27, Cloudy 8:00 2°. We left Pama at 9:00 and returned to Jula at 16:00. The holy mountain "Nenang" 6870m is now the highest unclimbed peak in Nyaiqentanglha East. Sepu Kangri 6956m had long been the highest but the American party of Mark Newcomb and Carlos Buhler succeeded in the first ascent of Sepu Kanri on October 2, 2002.

■ Attempt to cross Laqin La to Yigong Tsangpo

On October 28, cloudy then snowing 8:00 3°. We moved from Jula to Punkar (3860) by truck.

On October 29, fine 8:00 minus 1°. We made one's day trek to the beautiful Lawa valley in the east of Punkar with a view of the profile of Birutaso 6691m. Pretty Lawa valley is surrounded by such high peaks as Chuchepo 6550m, a nameless snow pyramid of 6620m and Birutaso. We walked up to Kangpu Monastery and Lake Kangu north of Birutaso. But we failed to see Birutaso.

In Punkar we stationed at a Tibetan house and arranged for the caravan to cross Laqin La 5300m to Niwu in the right bank of Yigong Tsangpo. According to the villagers there are three high passes over 5000m to Niwu Qu, a valley north of Nenang down to Yigong Tsangpo.

From the north to the south:- Laqin La and Bonggo La are north of the trade path from Punkar to Lhari via Keng La 5200m, while Liqun is north of Lawa valley.

Laqin La 5300m-----Pack animals can cross only this pass. Unmarked on Russian map.

Bonggo La 5303m-----Marked on Russian map. The trail is too steep for pack animals.

Laqun La over 5000m---Unmarked on Russian map. Pack animals cannot cross.

A famous plant-hunter, Frank Kingdon-Ward stayed at Punkar in 1924 on the way to cross Keng La to Lhari. For three-quarters of a century this remote village had been calm and quiet. However in recent years the circumstances have been changing as rapidly as in the other isolated areas. Roads suitable for vehicles are under repair. Some Tibetan houses make use of a solar battery unit for lighting and also kerosene engines to generate electricity. They enjoy video pictures. Villagers gain a substantial income from caterpillar fungi for Chinese traditional medicines and 'Matsutake' mushrooms (Chinese name: songrong) which are exported solely to Japan.

There was much difficulty in organizing the caravan to cross Laqin La due to two reasons. Firstly because this autumn snow had fallen earlier than in a normal year, the caravan leader and some of muleteers were afraid of snow on the pass and were unwilling to go to Niwu. In particular they worried that heavy snowfalls would prevent their return journey. Secondly, one of the horse owners strongly demanded compensation for the death or injury of his horses should this occur on the way. Discussions lasted a long time. In the end, they finally agreed to arrange for a large caravan to carry us to Niwu with 11 horses and 5 muleteers. It snowed in the night.

On October 30, cloudy 8:30 0°. It was a late departure from Punkar at 14:30. The caravan followed a trade path through Jiagongna valley toward Lhari and camped at a small pasture Qipudi 4040m alongside the stream. Weather was very changeable. Snow started to fall at midnight.

On October 31, cloudy after 15cm snowfall 8:00 0°. We left Qipudi at 10:40 and after having passed a junction to Bonggo La, the caravan entered a branch valley to Laqin La. Two hours' march up the valley took us to a wide open pasture at 4480m where the valley was divided to the northwest and to the northeast. The latter led to Laqin La. We camped there. We met a group of mountain goats.

On November 1, fine 8:00 minus 6°. The caravan ascended along the branch valley toward Laqin La. When we reached the last pasture at 4870, the muleteers suddenly refused to cross Laqin La and go down to Niwu. They decisively emphasized the difficulty and danger of crossing the pass judging from the conditions of the heavily snow-covered northern side of mountains that

surrounded the valley. No option was given to us. We had to abandon our original plan. We set up tents at the pasture and searched for a trail to Laqin La as we had to ascend the following day to at least the pass before retreating.

On November 2, fine then cloudy 8:00 minus 6°. A trio, consisting of Nakamura, Tibetan guide Tashi and one muleteer departed at 9:00 to Laqin La. The footpath above 5000m was covered with snow. As we ascended, the path not only became steeper but was entirely buried under the snow. Route finding was not easy. The conditions were obviously too dangerous for pack animals to follow the trail safely.

We stood atop Laqin La 5300m at 12:00. I had greatly anticipated a grand panorama from the pass of shining 6000m peaks and glaciers north of Niwu valley. A bit to my disappointment, however, what appeared in front of me to the north was not so alluring or fascinating. Only a spiky rock peak of 6060m towering in the northwest was attractive.

No Kajaqiao 6447m was visible, and other 6500m high peaks were also out of sight, being hidden by lesser ranges on the southern side. We descended to a camp at 4390m and decided to return to Punkar as soon as possible in order to carry on Phase II to the unknown mountains of Botoi Tsangpo, a tributary of Parlung Tsangpo north of Bomi.

On November 3, snowing 8:00 minus 3°. Snowfall was 20cm deep. Several groups of yaks caravans were moving in the snowy valley from Lhari to Punkar. We came back to Punkar at 16:30.

On November 4, cloudy 8:00 minus 1°. We were able to catch a truck from Punkar to Jula and to Xueka (3370) near Lake Basong (3500). Now Phase I of our journey was completed.

■ **Phase II - Unknown Peaks and Glaciers North of Bomi To Botoi Tsangpo - Yuri and Zepu Glacier**

On November 5, cloudy 8:20 0°. Xueka - Lake Basong

On November 6, fine 8:00 0°. Lake Basong - Bayi - Lamaling Monastery - Bayi

The weather became stable. The scenery of Lake Basong, with autumn leaves and surrounding peaks soaring into a blue sky, was nothing short of spectacular. It was indeed the Alps of Tibet.

On November 7, fine 8:00 minus 1°. Bayi - Seti La (5410) - Tongmai (2150)- Bomi (2735)

Another highlight was a complete view from Seti La of Namchabarwa, Gala Peri and other 6800m unclimbed peaks near Tsangpo Great Bend. The road from Bayi to Tongmai is now under construction for paving all the way.

On November 8, fine 8:00 0°. We entered Botoi Tsangpo from Bomi to Yuri and Zepu via Qingdou by Land-cruiser. The valley is opened and much populated. It was surprising to find a large jail was in such a small village. Now there was a breath of winter in the air. Tempting and challenging rock and snow peaks came into sight in succession. Very soon the forest was left behind. We arrived at Yuri (3100) at 15:00. Donald Kaulback and John Hanbury-Tracy passed this valley to the north in early October of 1935 on their journey to seek the upper Salween. We spent overnight in a shabby rest house at Yuri and organized a caravan. Yuri is a township having a primary school, hospital, bank, shops and power station with a diesel engine generator. It is located at the confluence of Zepu Qu northwestward and Botoi Tsangpo northward to Tungla La 5267m on Tsangpo-Salween Divide that Kaulback and Tracy crossed. We were able to have a view of the range of snow-white 6200 - 6300 m peaks surrounding Zepu Glacier from Yuri to the northwest. But the glacier itself was hidden by the forested hill in front.

Zepu Glacier is the third biggest glacier in Nyaiqentanglha East. It has an total glacier area of

66 square kms. The glacier end is located at 95°15'E and 30°17'N. In 1989 the China - Japan Joint Glaciology Expedition to Qinghai-Tibetan Plateau conducted a scientific survey and research of Zepu Glacier. The report summarized as follows:

"Currently Zepu Glacier, a valley type glacier, stretches for 19km from the upper end to its terminus. The highest point of the glacier basin is 6364m in altitude and the lowest one at the terminus 3500m. The last 7kms is covered with superglacial till and have penetrated into the forested area. In this situation, trees are often trapped and buried by the morainic sediments deposited by advancing glaciers, and therefore buried wood sometimes is found in sediments around the glacier. It provides good samples for radiocarbon dating. Around the ablation area of the glacier and downstream of the terminus, several lateral and terminal moraines are distributed in a typical U-shaped valley." (Professor Shuji Iwata)

After the China-Japan party no foreigners visited Zepu Glacier - Zepu village and beyond. Local people confirmed this.

On November 9, fine 9:00 2°. Our caravan of eight horses and four muleteers left Yuri in the late morning up the valley of Zepu Qu and camped near by Zepu village (3330).

■ To the unknown Jalong Glacier

Zepu Glacier was considered very attractive, but we narrowed the target of our exploration to Jalong Glacier and veiled peaks in the vicinity for the following two reasons. Transport of supplies and gear to Zepu Glacier takes time as there is no trail for pack animals, while Jalong Glacier 12km north of Zepu Glacier has been unvisited by foreigners till today and access is easier than Zepu Glacier.

On November 10, fine 8:00 minus 4°. At 10:00 we departed. Zepu Qu is a typical U-shaped valley stretching to the north. We marched for half an hour on an open flat riverbed with good grasses and lower shrubs along the left bank of Zepu Qu. Then the trail passed through dense primeval forest of large conifer trees. Tall trees had hindered visibility from the trail almost all the way till we reached a bridge to cross the stream to the right bank of Zepu Qu. In front Jalong Glacier appeared. The terminal part of several kilometers was covered with sediment. The slope was very gentle but the surface looked rough and complicated. It would be similar to the other glaciers in this mountain range. We set up tents near the bridge (3760) at 15:15. In late afternoon we went down to the glacier end for a preliminary search of the glacier. Also we found a good lookout point on the left bank of Zepu Qu. The muleteers kept big camp fires burning all night long in order to protect us from attacks by such dangerous wild animals as bears and snow leopards.

On November 11, fine 7:00 minus 4°. We had to take advantage of the best but slimmest chance of taking photos of Jarong glacier and peaks. I got up before dawn and ascended to a lookout point that I had found during the previous day. Morning mists and clouds were gradually moving away and fading out as the sun rose. From the south to northwest a spectacular panorama of the most alluring Jalong I 6292m, the highest Jalong II 6420m, Jalong III 6070m and Jalong IV 6224m was unveiled in one hour. The glacier between Jalong II and III seen before me flowed down eastward forming terraces and icefalls one after another.

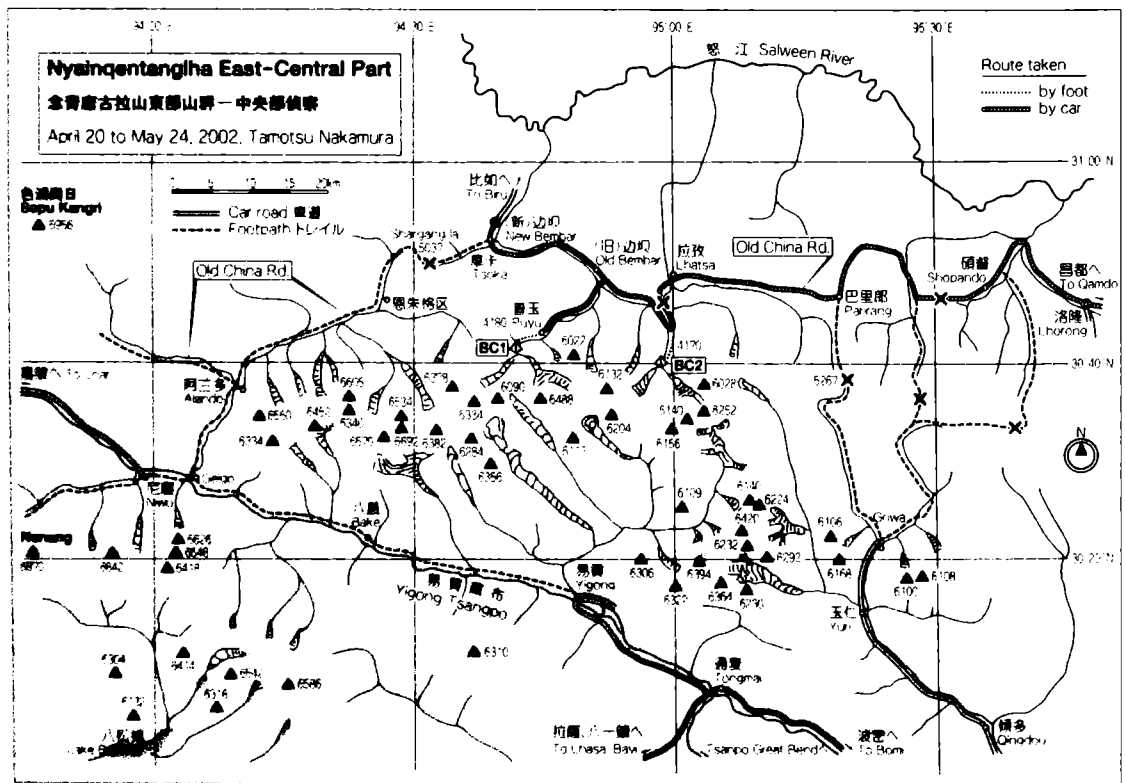
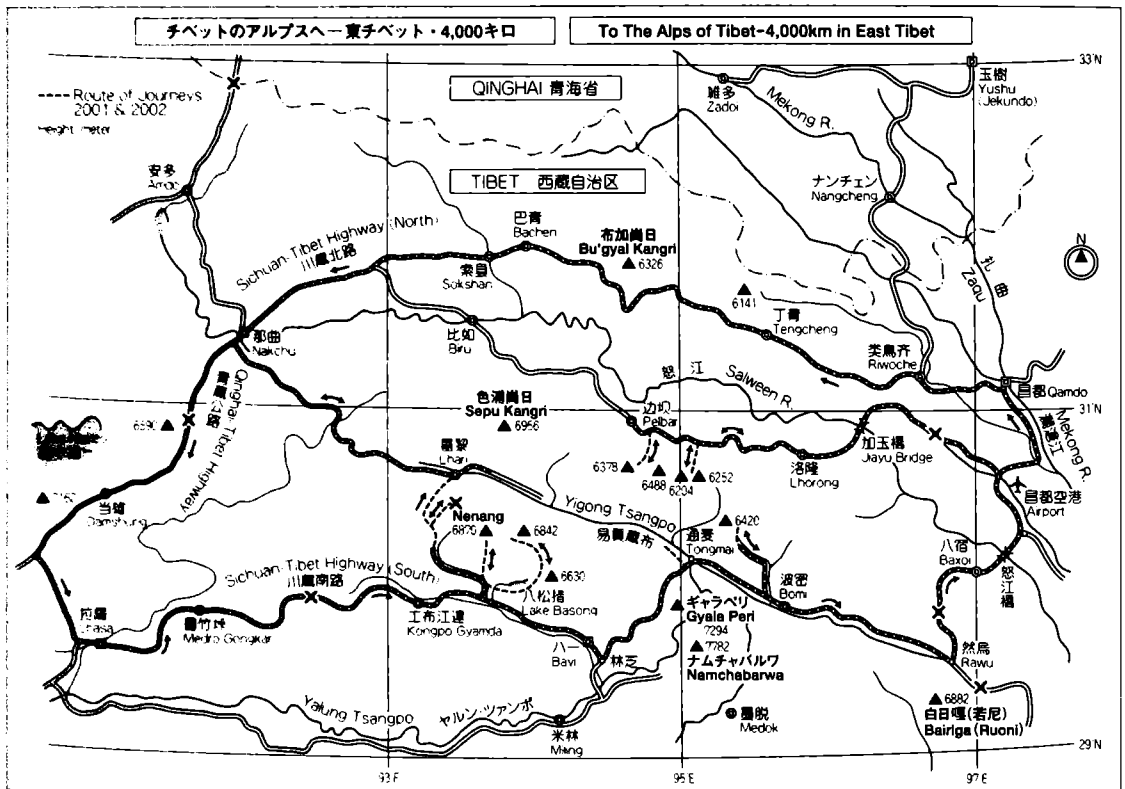
According to PLA 1:100,000, Jarong Glacier has four branch streams. The terminal main stream is 5km from the glacier end at Zepu Qu to the junction of the four branch glaciers. From the south each branch glacier has an overall length of 5km, 8km, 7km and 9km respectively. The shining Jarong I is located west of the glacier head. On the way back we again found another

lookout point where we could see the snow-white 6000m peaks ranging at the head of the westernmost glacier. We returned to the campsite (3350) in wide open pasture with nomad huts near Zepu village at 18:00.

On November 12, cloudy 8:30 minus 2°. The finest weather lasted one week and gave us blue sky, but it now ceased. The caravan returned to Yuri at about noon where our Land-cruiser had been waiting for us. We hurried to Bomi. Phase II completed.

On November 13/14: Bomi - Bayi - Lhasa . Safely returned.

The total expense per person - departing from / returning to Tokyo - was US\$8,100 which includes return air fare of Tokyo-Lhasa, US\$ 2,000 for the fee for a permit to enter restricted and unopened areas and the expense for 14 days horse caravan.

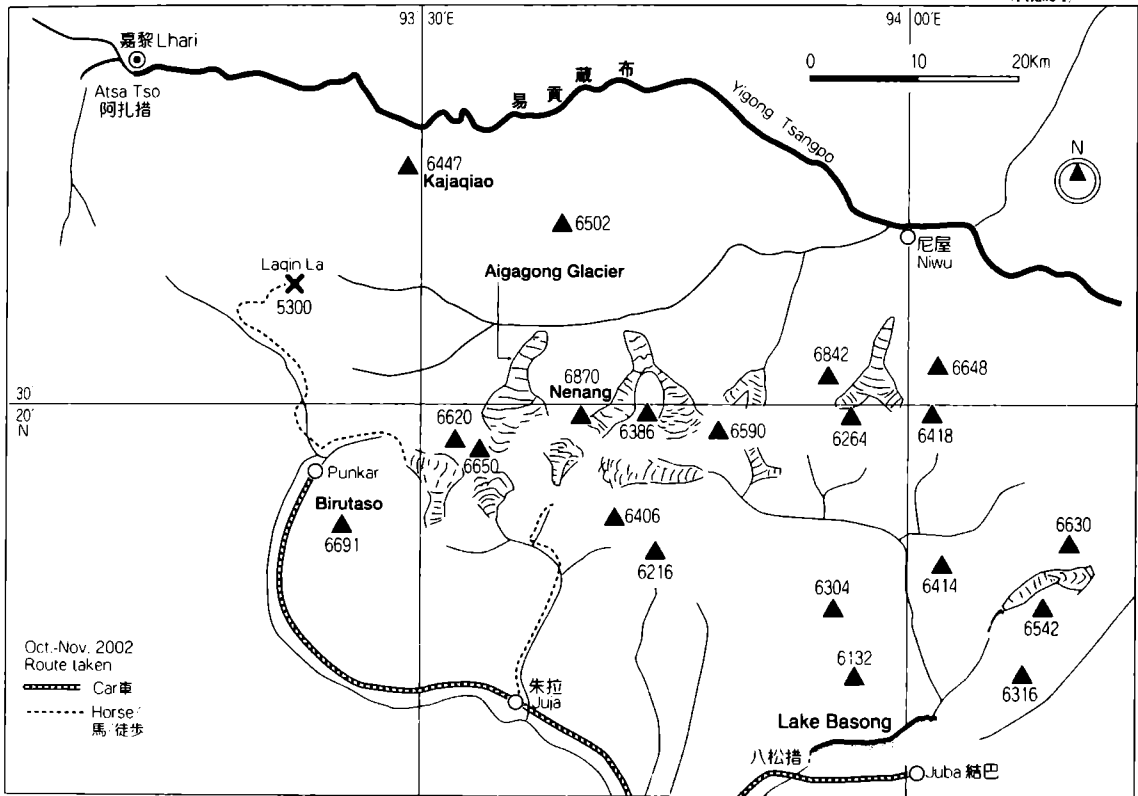


Nyainqentanglha East - Nenang 6870m & Botoi Tsangpo

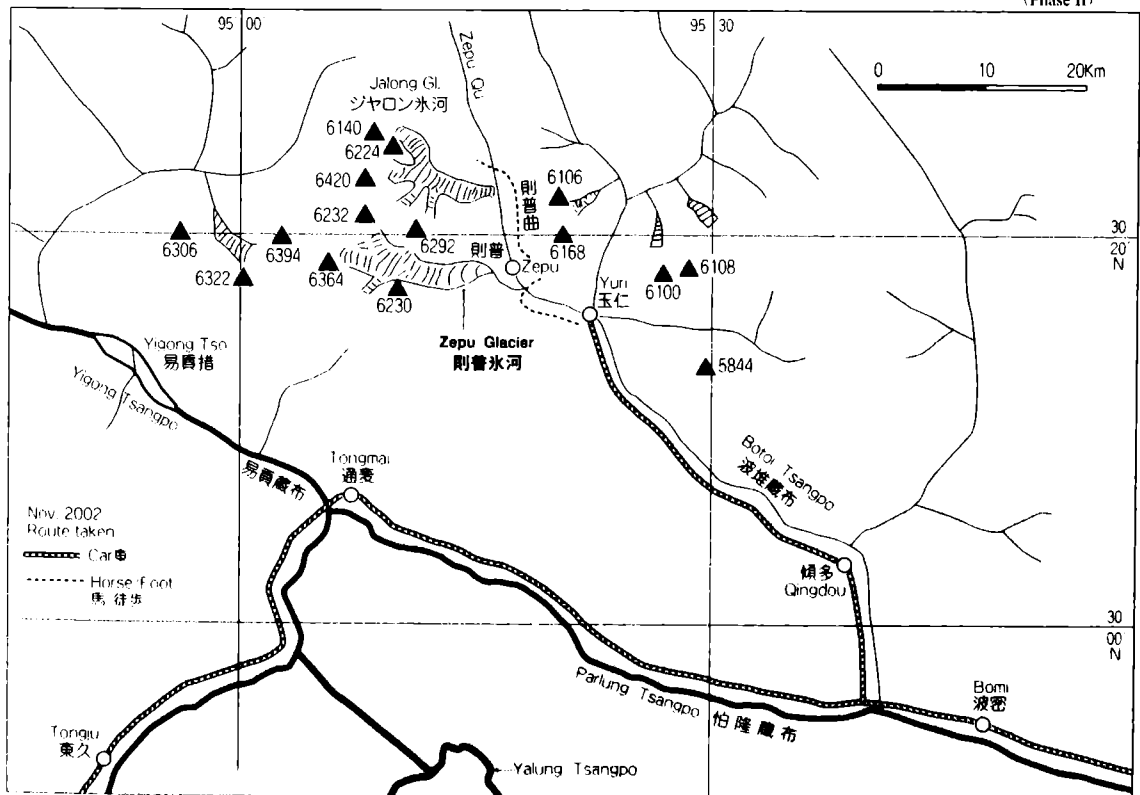
念青唐古拉東部山群-ネナン6870m/波堆藏布

October 18—November 19, 2002 Tamotsu Nakamura

(Phase I)



(Phase II)



PILGRIMAGE ROUND MEILI XUESHAN

Northwest Yunnan - Circumnavigation of the Holy Mountains

"Thank you for your letter of October 30th with the accompanying pictures. Congratulations on your successful circumnavigation of the Kang Karpo range. It is most interesting country. As we had bad weather most of the time I was most appreciative to see your pictures and the most of mine just show clouds. Mr. Nina is a very good man who had made the pilgrimage quite a few times and knows all the various places to stop." Nicolas B. Clinch wrote to me as above.

When I published *East of the Himalayas* (YAMA-KEI Publishers Co., Ltd.) in March 1996, I committed myself to the next target in Hengduan Shan (Mountains). I wrote in the epilogue that I should take up the new venture focused on the deep gorge country. The travel on a pilgrimage round Meili Xueshan (Kang Karpo or Ka-Kar-po range) had another objective to find a possible route to the source of Irrawaddy River beyond the Salween-Irrawaddy watershed.

Meili Xueshan, the local Tibetans call Kawagebo, has long been a religious mountain to Tibetan Buddhists although it is not so famous as Kailas in the western Tibet. Thousands of pilgrims visit the sacred mountain from the remote corners of the eastern Tibet, Qinghai, Gansu, Sichuan and Yunnan provinces. Presumably the first foreigners to have looked this mountain were French Roman Catholic missionaries. They had established several quarters in the upper Salween/Mekong River basins in early 1860s. In 1913 F. Kingdon Ward first surveyed the eastern glacier of the highest peak, Kawagebo (6740m) (*Mystery Rivers of Tibet*).

The pilgrimage of about 300 km round Meili Xueshan is also a part of the trade path (old tea road) connecting Yunnan and Lhasa through the southeast Tibet. The trail crosses five high passes to complete the circumnavigation. Starting at Deqen a caravan crosses the Mekong River (Lancang Jiang), goes over the Doker La (4478m) south of the main range, descends to the Salween River (Nu Jiang), ascends to the Shu La (4815m) the northernmost part of the range and then comes back to Deqen. It takes 11 - 13 days on foot. As far as I know, only two parties of foreigners undertook a full circuit of the pilgrimage after Kingdon Ward had done it in 1911 - 13. They were the parties of N. B. Clinch in 1993 and a pair of Spanish and French in 1995. Mine is the fourth. In the early 20th Century M. Bacot, F. M. Bailey, Edger J. Rock and A. David-Neel had entered Tsawarong and traced a part of the pilgrimage.

The motive that drove me to launch this plan was not only an interest in the folklore and to walk together with Tibetan pilgrims, but the chief attraction was to see and unveil the hidden mountains in the deep gorge country. There remain the wide areas unexplored. It was interesting too to observe the present situation of Tsawarong district and examine the geopolitical history of the troubled borderland between China and Tibet.

The problem was very scarce information. The maps to cover the pilgrimage in my hand were only ONC and TPC of U. S. Defense Mapping Agency and two maps made by the Chinese authority of Yunnan Province: one is 1/225,000 for Gongshan Pref. and 1/400,000 for Deqen Pref. No Chinese maps to cover Tibetan side of the pilgrimage were available. (Now Russian topographical map of 1:100,000 available)

Upon arrival at Deqen on 4 October via Kunming - Zhongdian (Shangri-La), I discussed with Travel Development Co. of Deqen County. They explained a route of 13 days circumnavigation, giving the name of each spot where our caravan would pass and stop. It was hardly possible.

however, to identify the places on the map. The other difficulty was that the names of places they quoted were mostly different from those of the early explorers.

On 6 October, in the rain we left Deqen by a car down the Mekong River for Yangtsa. The monsoon season was not over yet. Our members were five in total, and five mules were employed. Lu Idong was my agent in Kunming since 1993 and an interpreter as well. Chen was a guide of Meili Xueshan Travel Co. Nima Tsuli, a farmer living in Yangtsa, led our group as a pilot. He had accompanied N. B. Clinch in 1993. Ms. Xu-in joined as a cook. Lu is a Han but all of the other four were Tibetans.

Crossing a suspension bridge over the Mekong River at Yangtsa we started early afternoon. Our baggage were loaded on four mules and I rode on a mule. The trail ascending a steep spur and mountain slope took us to a small village of Yongju, where we spent a night at Nima's relatives' house.

On 7 October, the weather was bad in the morning. Baimang Xueshan (Paima Shan) in Yangtze-Mekong divide sometimes came into view in heavy drizzles sailing up the Mekong valley. The path followed the southern side of the ridge looking down to a village of Yongxi, formerly called Londre,. Before long a path to the Doker La went along a stream in the primeval forest. It became very hard to go through the stream because of overflowing water, mud and irregular stones. Mules were gasping and struggling. In the late afternoon the narrow valley opened suddenly and we reached a small pasture of Yongxitong. We stayed at a herdsman's hut.

On 8 October we departed for the Doker La pass, 'white stone pass'. Autumn leaves had a beautiful contrast. The trail left the main valley and climbed up a steep ridge and entered a broad hanging valley, which led to the pass. Several bands of the pilgrims were ascending towards the holy mountain in a row like a procession of ants. On the top of the pass, following the Tibetans I walked three times around a Qirm with many prayers' flags fluttering in the wind. On the opposite side of the pass there was also a broad hanging valley, at the bottom of which young girls and boys were having lunch. They had left Chamdo one month ago and had come on foot carrying personal belongings with them. Their meals were extremely simple, only a bowl of tsampa and tea. However they were very tough and friendly. I interviewed many pilgrims. They believe three principal merits of the pilgrimage.

- (1) They would be promised a happy rebirth in the abode of Chennezigs (the western land of bliss.)
- (2) They would be recognized to have read all the Buddhist scriptures that a priest of high virtue reads in his life.
- (3) They would be also recognized to have performed pilgrimages to all the monasteries in Tibet.

Beyond the Doker La located on the Mekong-Salween divide to the west, we entered a territory of Tsawarong district of Tibet. According to the present administration of China, Tsawarong is a district of Zayul County. Tsawarong was warm and the most fertile and thickly populated land of Tibet. The trail from the Doker La went down along a stream. In the back ground sharp 5000m peaks with snow and rocks came into sight. As we marched down the valley, autumn leaves were composing a wonderful harmony with splashing cascades. Bamboo forest in the vicinity told us that we had descended to a subtropical zone in a few hours. The pilgrims cut bamboos and carried them back to their home.

On the following morning I took pictures of two splendid snow peaks of 6108m and 5775m on the western ridge of the main summit of Kawagepo (6740m). Not only these two peaks, but also all the other peaks were unclimbed and unexplored.

On 10 October we crossed the Lontong La (3580m) and went down to Aben together with some 80 pilgrims and 25 mules. Men and women were twirling prayer drums and even small children were trudging bravely along with parents. They had started from Aben and were about to complete the circumnavigation in 11 days. We stayed at a farmer's house in Aben. Home made white spirit made from barley was excellent.

I would say that this pilgrimage route was a road of Matsutake mushroom too. Plenty of Matsutake grew near quercus trees. Matsutake gathered by farmers were processed with salt and shipped to Degen via the Doker La or Shu La, and then were exported to Japan. Matsutake harvest was largely contributing to the farmers' earnings.

On 11 October the weather was fine. Tracing the trail through a gorge with hundred meters high cliffs on both sides, we reached the confluence of the Salween River and its tributary, the Lhakang-ra River. The point was called 'La-kor-ah' by Kingdon Ward and as 'Lhakang-ra' by A. David-Neel. Now it is called Chunanico.

It rained heavily in 1996. Brown colored rapids were raging. It was very hot on the river bank and the valley was arid and dreary with less vegetation. There was a small monastery at the confluence where we found an old peasant. He had left Batang of Sichuan with a group of his friends on pilgrimage. An illness had suddenly deprived him of his strength and he was unable to walk and had to fall behind his friends.

Our caravan marched northwards along the left bank of the Salween River. Every a few kilometers the river bends at a sharp angle. The trail was sometimes unstable stone steps cut on steep cliffs, where treacherous rapids were roaring. Nima led our caravan safely. We put up our camp near a hot spring.

On 12 October, we proceeded further northwards on the arid river bank where prickly pears grew gregariously and arrived at Zhanang (1950m) in the early afternoon. Zhanang is the administration center of Tsawarong district, and there were the offices of People's Government and Communist Party as well. The first primary school was opened in this area last year. We pitched our tents in a corn field. This village had been written as 'Chia-na or Trana' by Kingdon Ward, 'Trana' by F. M. Bailey and 'Thana' by A. David-Neel.

To the west from our camp, Pk 6509m the second highest peak of Meili Xuehsan massif rose with its magnificent west buttress of fluted ice. More than 30 villagers gathered to our camp. They were friendly and full of curiosity. Kingdon Ward had noted his observations on Tsawarong people that they had been hospitable, of good nature and disciplined. He had also emphasized that women were pretty. In Zhanang, I collected as much as information.

- (1) There was a possible route to Zayul district of the upper Lohit River beyond the
- (2) Salween-Irrawaddy divide and the sources of the Irrawaddy River.
- (3) Air crashes of the Allied Air Force in the Humps (Hengduan Shan) had taken place during World War II. Their remains were still there.
- (4) Christianity was prevalent among Tibetans in the Salween River basin.

In the early morning of 13 October, a snow peak soaring in the southernmost point of the Salween-Irrawaddy divide appeared. Presumably this mountain would be Ke-ni-chun-pu, which Kingdon Ward wrote in his book (*The Land of the Blue Poppy*). He assumed this was 6100m high. However, the current survey by the Gongshan Prefecture had revealed the height to be only 5128m called Kawakabu.

The pilgrim path left the Salween River at Zhanang and went up northwards to the Tongdu La (3340m) and down to the Wi Chu (or Yu Chu), a tributary of the Salween River. We were now entering the heart of the deep gorge country. Descending from the pass for a while, I could look down on the turquoise stream of the Wi Chu meandering through the inspiring narrow gorge. The S-bend torrent of Wi Chu represents a peculiar topographical deformation of Hengduan Shan.

On 14 October we stayed at a monastery in Gebu (2330m), where we were again received by many villagers and their welcome dance lasted till late.

15 October was the highlight. We ascended about 1800m straight to the Gebu La (4100m) and went down again to the Wi Chu. The Gebu La was the best lookout point to have an overall view of both, the Salween-Irrawaddy divide and Salween/Wi Chu-Mekong divide over the S-bend valley of the Wi Chu. To the northwest, we saw two 6000m peaks of Baxoila Ling Range. One was 6146m peak and the other was 6005m peak. To the north we also had in sight the twin pyramids that Kingdon Ward had noted as 'Orbor'. This would be the highest peak 6324m of Damyon massif. To the southeast, the crystal dome of Pk 6509m demonstrated its formidable north face. To the east and farther to the northeast, the Shu La (4815m) and 5000m peaks with rock pinnacles and small dead glaciers were extending farther to Damyon.

17 October was the final leg of our trek to the Shu La and beyond, down to the Mekong valley. We left a tiny village of Late for the Shu La. The trail ascended steeply up the ridge covered with firs and quercus trees. Lu and Chen met a large bear running away. Shortly later a prominent sugarloaf peak of 5775m and then the massive Pk 6509m appeared to the south.

The following is a summary of the American attempt to Pk 6509m in September-October 1993, from the *American Alpine Journal* 1994.

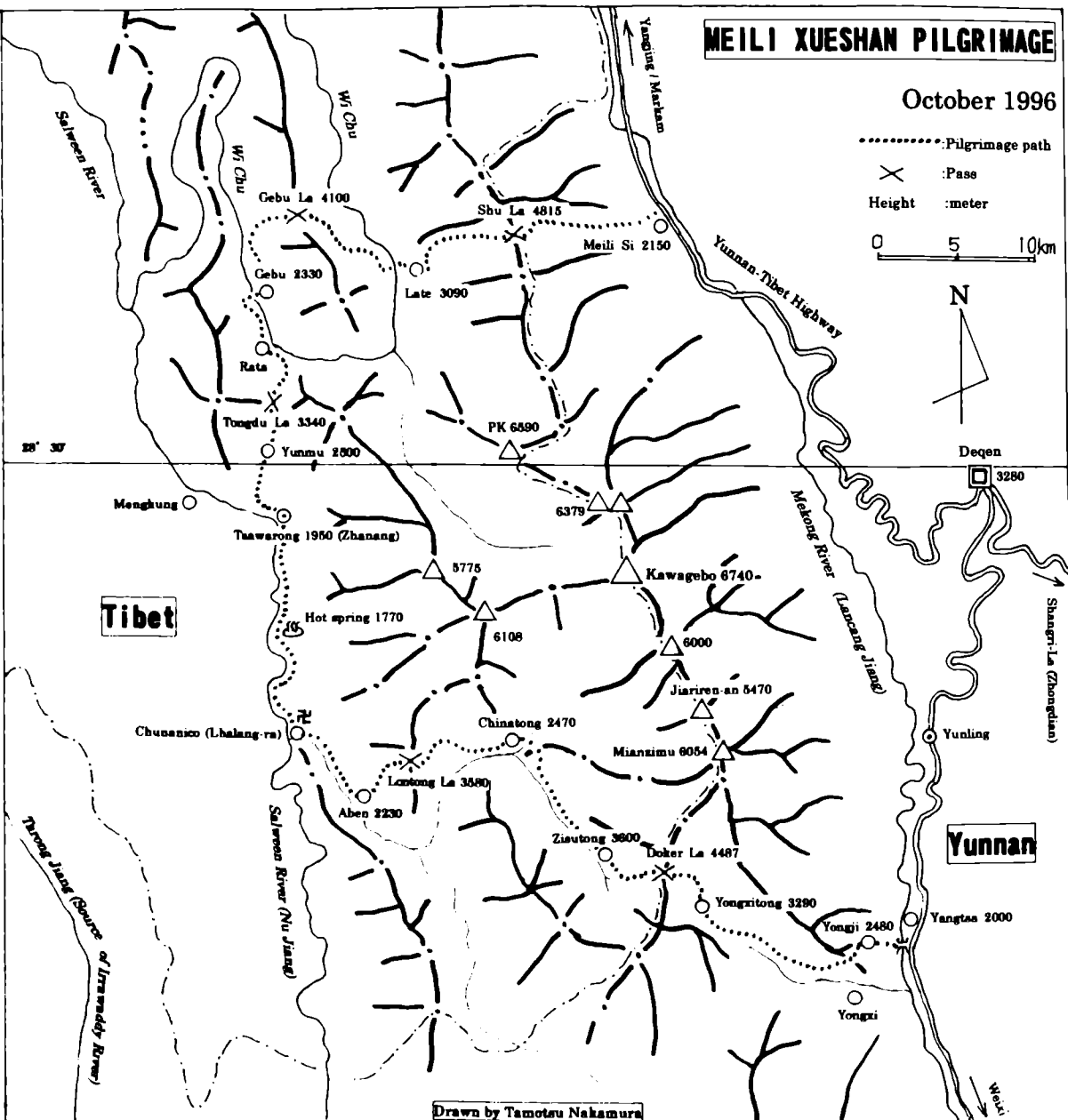
'The climbing party crossed the Shu La into Tibet and set up base camp under the west ridge. Camp III was placed at 5300 meters on the ridge after climbing, mostly on loose slate and shale, up a second rock buttress. However the summit assault was given up at 6100 meters by avalanche conditions and a small snow wall with an overhanging cornice that blocked the ridge.'

Standing on the Shu La at 3:00 p.m. I sang together with Chen 'Airasaw' (God blesses you! I made it---). The landscape surrounding the Shu La was of red-brown color and looked like inorganic world. The weather changed suddenly and it began to snow but in a few minutes we were again in the sunshine. To the east beyond the Mekong valley, desolate 5000-5500m peaks rose like gigantic tombs of limestone, under gloomy clouds surging as foam-crested waves. On 18 October, we hurried on our way down to the final goal, a village of Meilixi on the right bank of the Mekong River. (This text is from *The Himalayan Journal Vol. 53, 1997*)

MEILI XUESHAN PILGRIMAGE

October 1996

.....: Pilgrimage path
 X : Pass
 Height : meter
 0 5 10 km



Drawn by Tamotsu Nakamura

A Selection of the Photographs and Unclimbed Peaks

Priority has been given to highlight the unfrequented Nyainqentangla East (NE), Kangri Garpo Range (KG) & Deep Gorge Country (GC). All the peaks shown on the photographs in these three mountain regions remain unclimbed.

B Copy Rights of the Photographs

All the 71 photographs including Front Cover other than those of the following numbers were taken by Tamotsu Nakamura:-

No. 51 - The NE Face of Kawagebo 6740m taken by Naoyuki Kobayashi.

No. 56 - The E Face of Yangmaiyong 5958m taken by Shaohong Zhang.

No. 58 - The E Face of Xiannairi 6032m taken by Shaohong Zhang.

No. 69 - Panorama of Minya Konka satellite peaks taken by Kenji Sudo.

No. 70 - The W Face of Zhongshan 6886m taken by Kenji Sudo.

C Layout and Abbreviations applied in the Photograph Captions

The layout and arrangement of the photographs are in the following order:-

- (1) NE = Nyaiqentanglha East
- (2) KG = Kangri Garpo Range
- (3) GC = Deep Gorge Country of Hengduan Mountains
- (4) WS = West Sichuan Highland of Hengduan Mountains

E, W, S & N = East, West, South & North



1. The S Face of a holy mountain Nenang 6870m and glacier. NE.



2. The challenging S Face of a holy mountain Nenang 6870m, NE.



3. The S Face of a nameless peak 6537m, SE of Nenang. NE



4. The S Face of a spiky rock peak 6066m, N of Laqin La. NE



5. The W Face of a nameless 6414m peak, near Zhongba, N of Lake Basong. NE



6. The beautiful W Face of Chuchepo 6550m, E of Punkar. NE



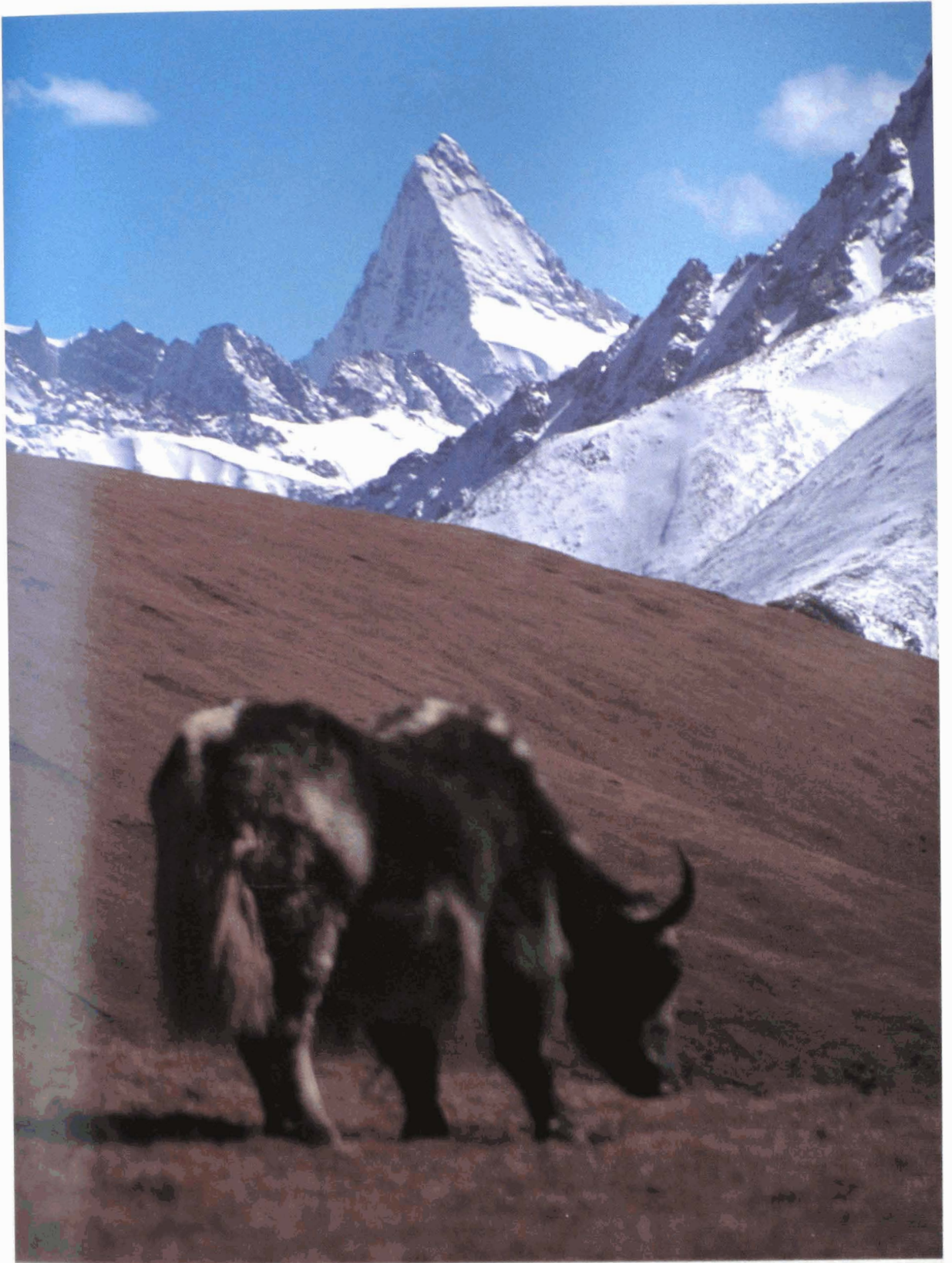
7. The S Face of a peak 6137m, N of Lamayalung, N of Lake Basong. NE



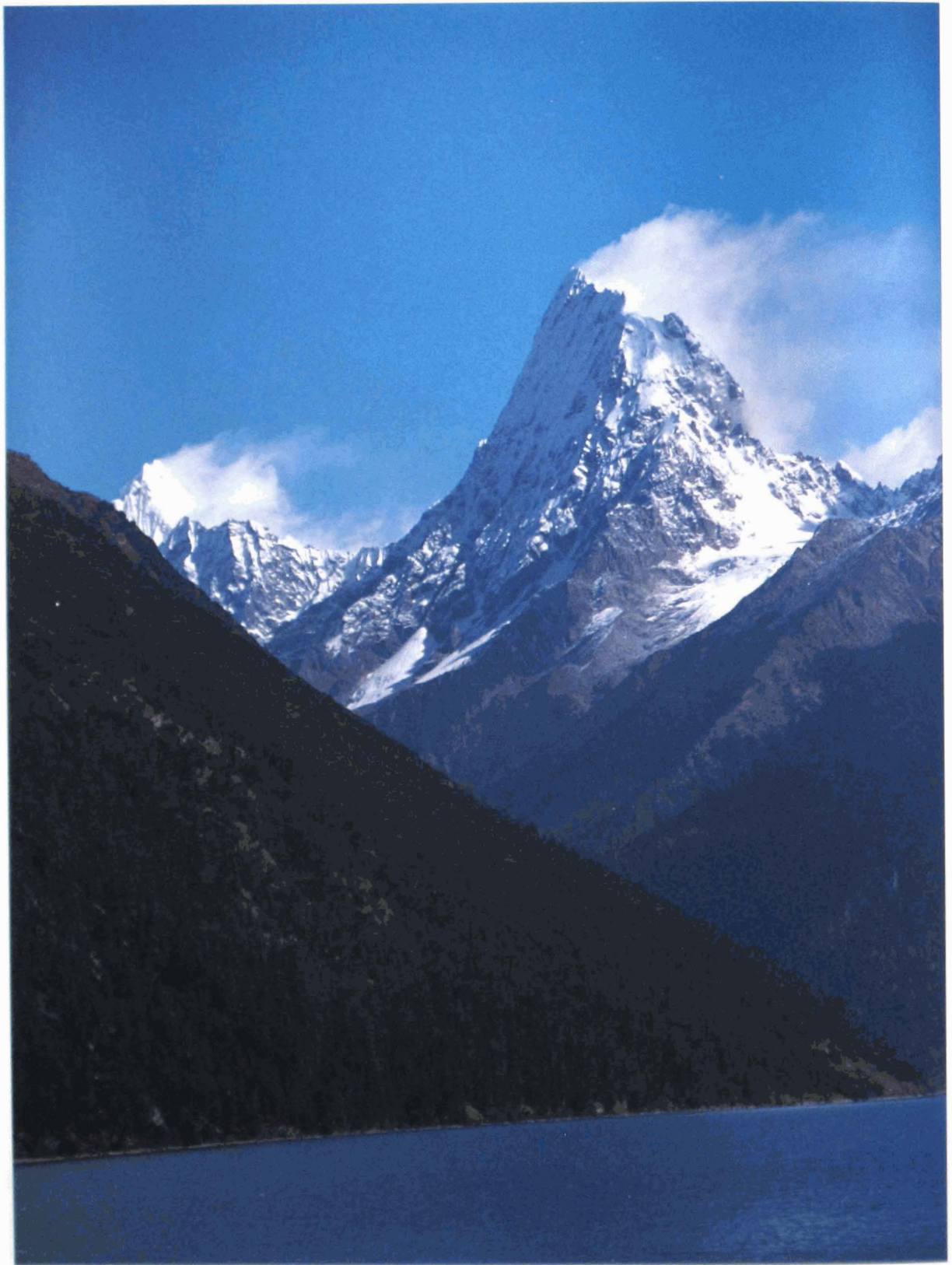
8. The S Face of Jiongmudazhi 6590m, NW of Lamayalung, N of Lake Basong. NE



9. The N Face of a nameless peak 6110m, S of Lamayalung, N of Lake Basong. NE



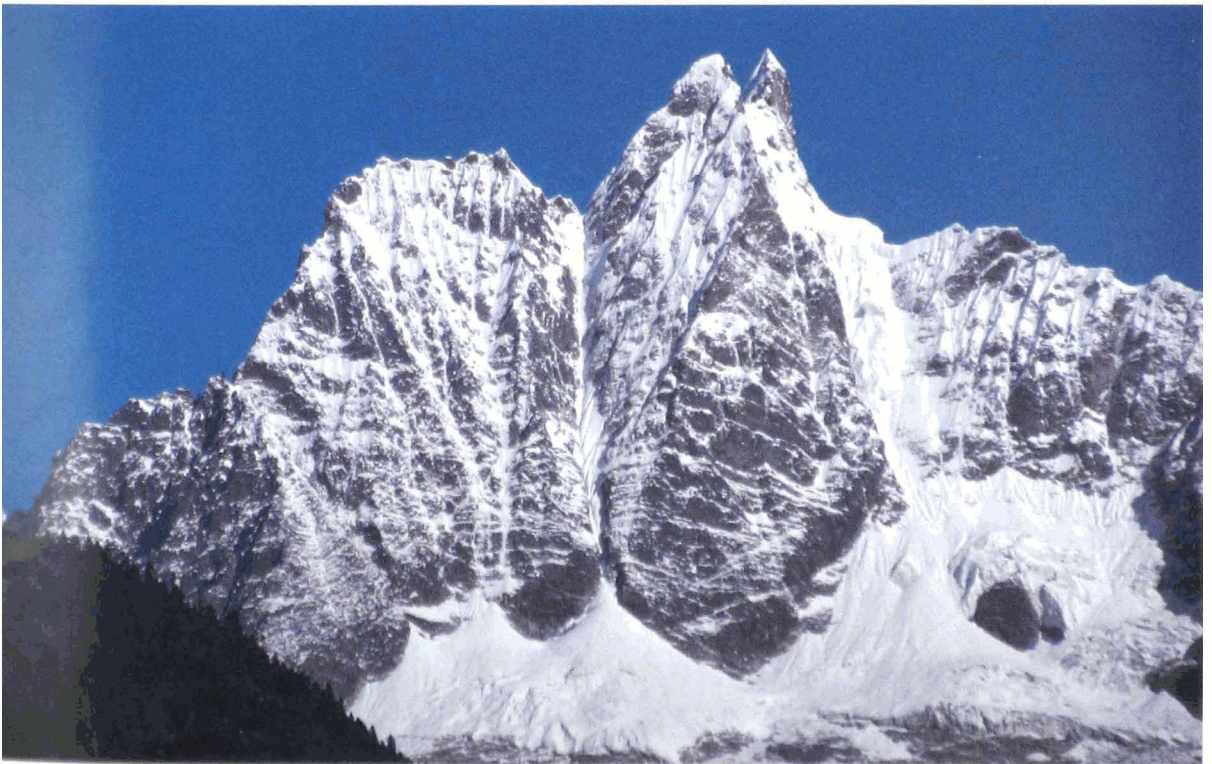
10. Matterhorn of Nyainqengtanglha, Kajaqiao 6447m, from W. NE



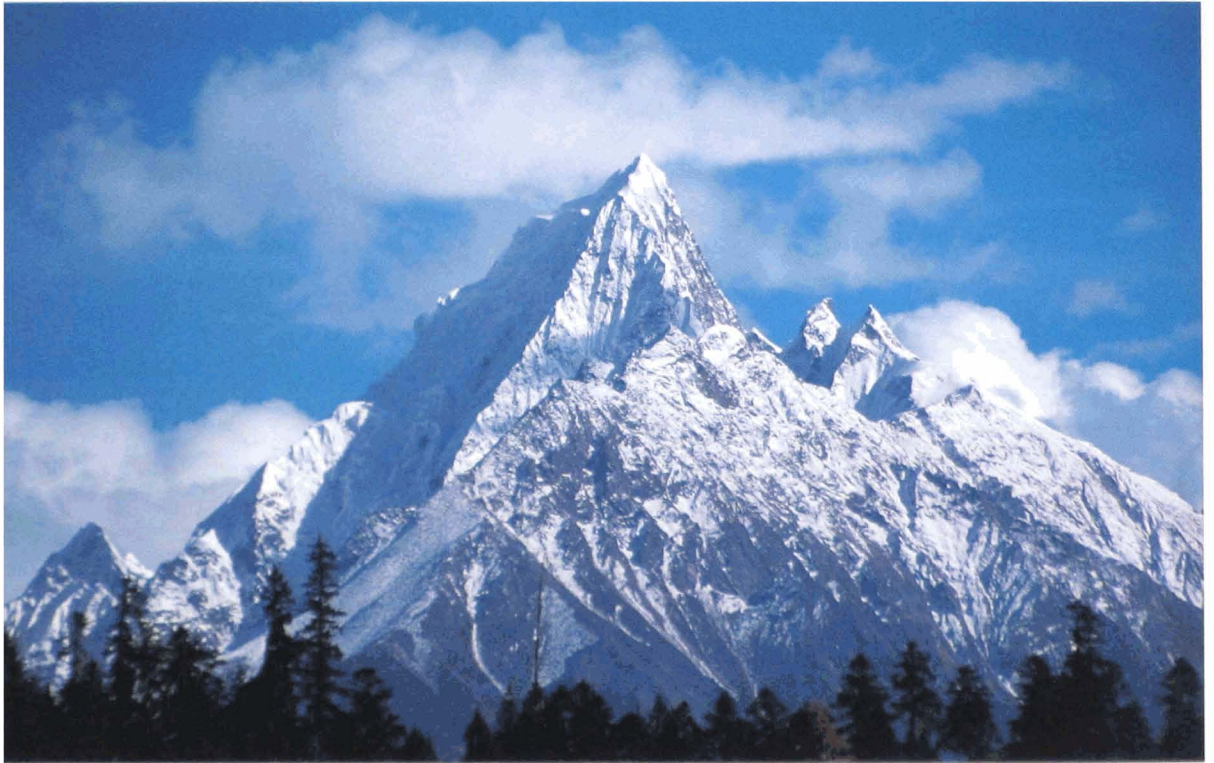
11. Lake Basong and the W Face of Jieqinnalagabu 6316m. NE



12. The W Face of Lumboganzegabo 6542m, E of Lake Basong. NE



13. The S Face of Saamareze 6132m, N of Lake Basong. NE



14. The W Face of a spiky peak 5844m, E of Yuri, Botoi Tsangpo. NE



15. The S Face of a 5000m peak, E of Botoi Tsangpo. NE



16. The E Face of Kona I 6378m (right) & II 6334 (left), Puyu valley. NE



17. The E Face of Chung Jung Tso 6204m, Dam Dol valley. NE



18. The N Face of Goyon II 6140m, Dam Dol valley. NE



19. Infant glacier lake down Goyon I & II, Dam Dol valley. NE



20. The E Face of 6300m peaks surrounding the Zepu Glacier. NE



21. The stunning E Face of Jalong I 6292m, W of Zepu Qu. NE



22. The Jalong Glacier and the E Face of Jalong II 6420m (left) & III 6070m (right). NE



23. The E Face of Jalong IV 6224m, W of Zepu Qu. NE



24. Tibetan girls living in the 5000m high plateau of Lhari. NE



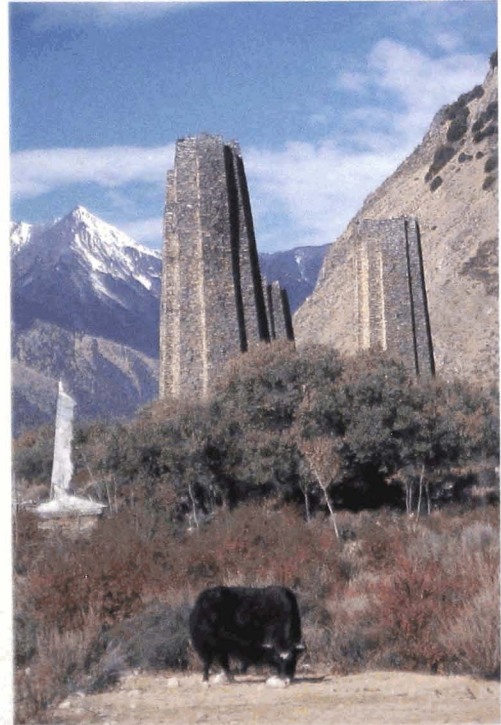
25. Tibetan villagers welcoming foreigners, Dam Dol valley. NE



26. Sky burial in the heart of East Tibet, Lhorong County. NE



27-1. Tibetan children in Punkar village, NE



27-2. Ruined defense tower near Gongpo Gyamda, NE



28. Yaks caravan in the snow on the trail - Lhari to Punkar, NE



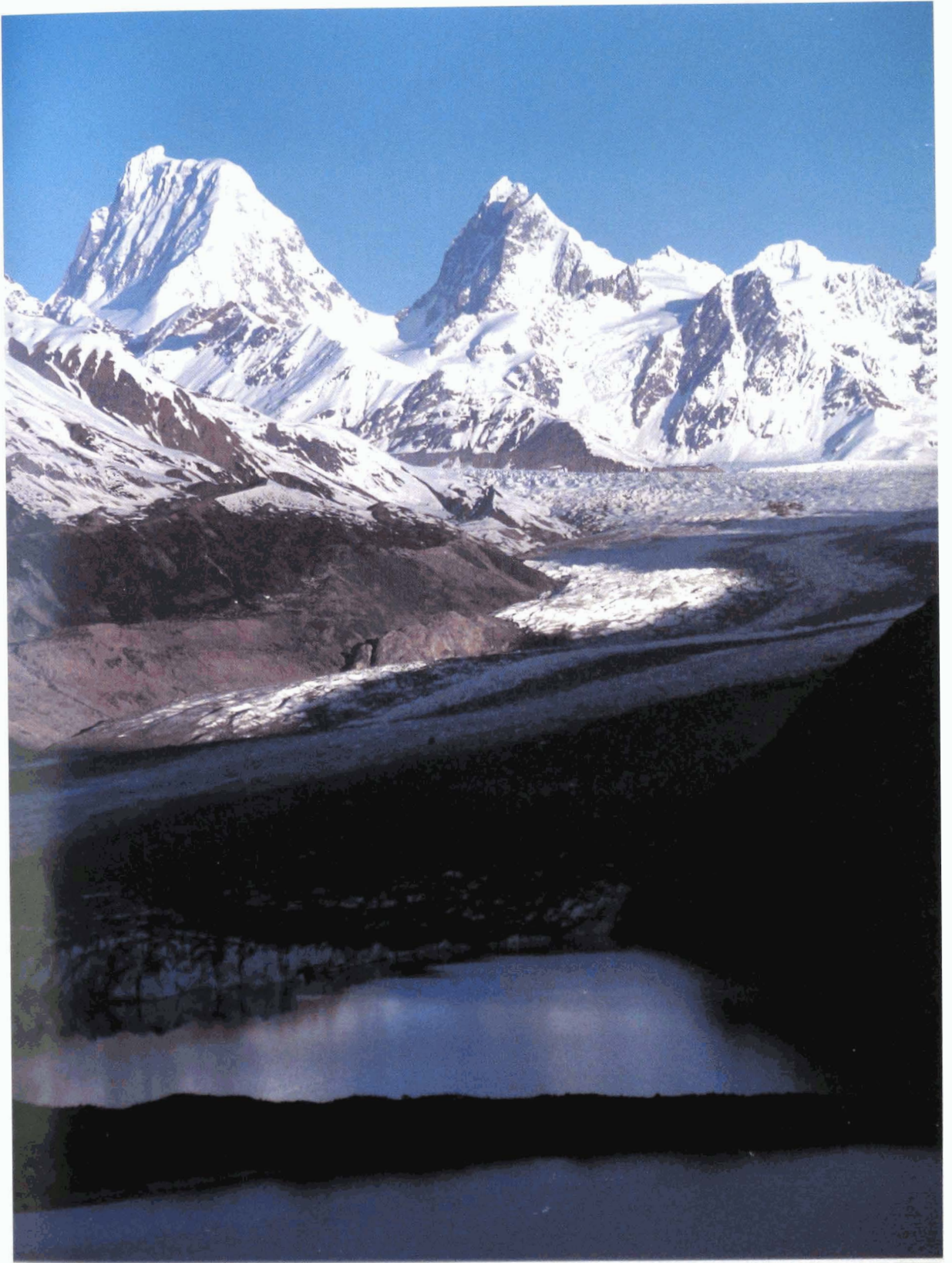
29. Yaks caravan crossing a stream from Keng La to Punkar. NE



30. The W Face of Namchabarwa 7782m, a view from Seti La.



31. The W face of Sengtang Bu 6812m, NW of Gyala Peri.



32. The E Face of Gongyada 6423m (left) & Zeh 6127m (right), Lhagu. KG



33. An open and fertile valley of Lhagu, N of Rawu. KG



34. The Lhagu Glacier and E Face of Hamokongga 6260m (right), W of Lhagu. KG



35. The Lhagu Glacier and E Face of 6321 - 6606m peaks. KG



36. The NE Face of Ruoni (or Bairiga) 6882m, SW of Kogin. KG



37. The N Face of Gheni 6150m, SE of Rawu. KG



38. The E Face of 5583m peak on Wi Chu-Salween Divide. GC



39. Caravan crossing Di La 4581m on Mekong-Wi Chu Divide. GC



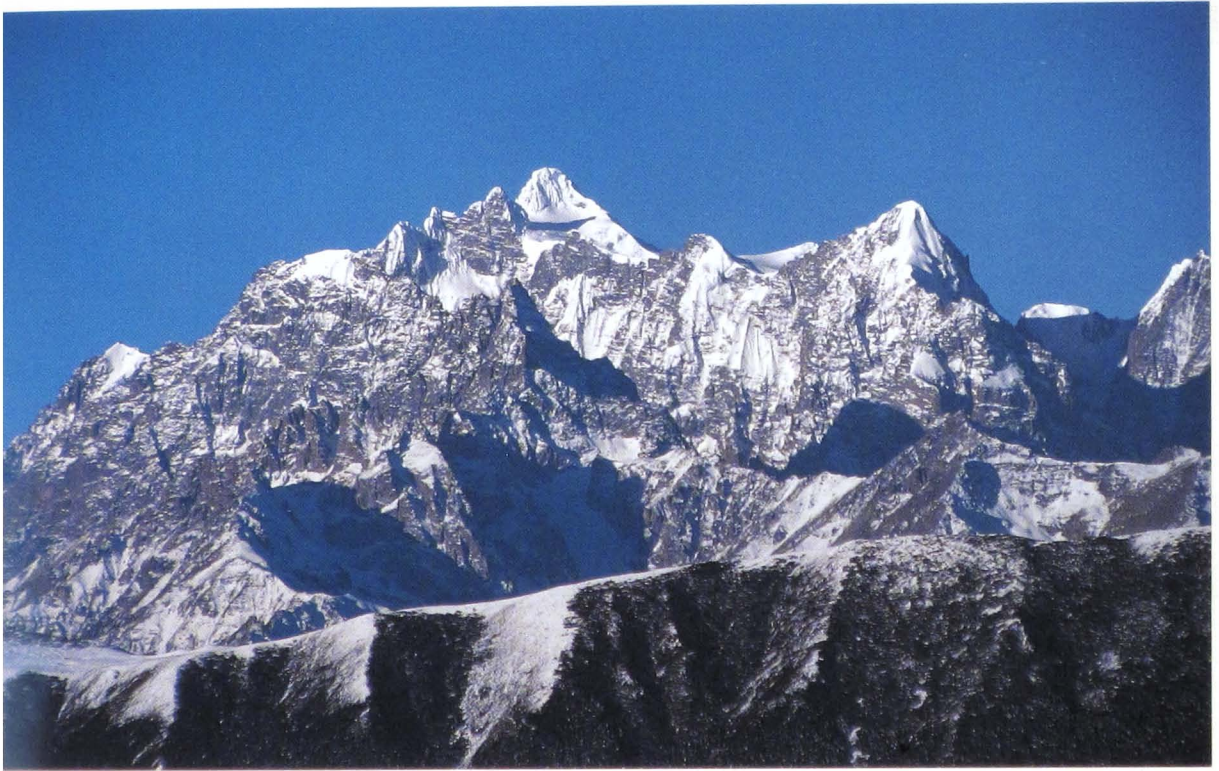
40. The N Face of 5300 spiky peaks on Mekong-Wi Chu Divide. GC



41. The deep gorge country - Wi Chu near Gebu. GC



42. The typical Upper Mekong valley, N of Yangjing. GC



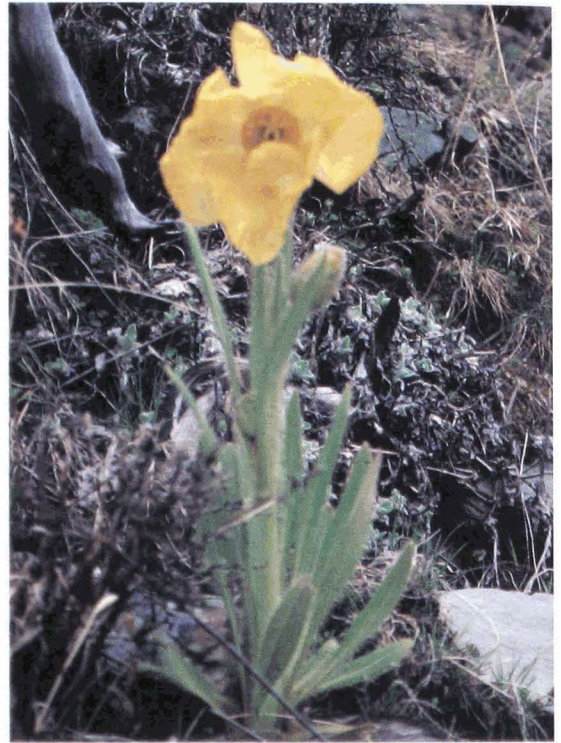
43. The E Face of Damyon (main peak) 6324m, W of Mekong. GC



44. The E Face of 5900m peaks of Damyon massif, S of Damyon main peak. GC



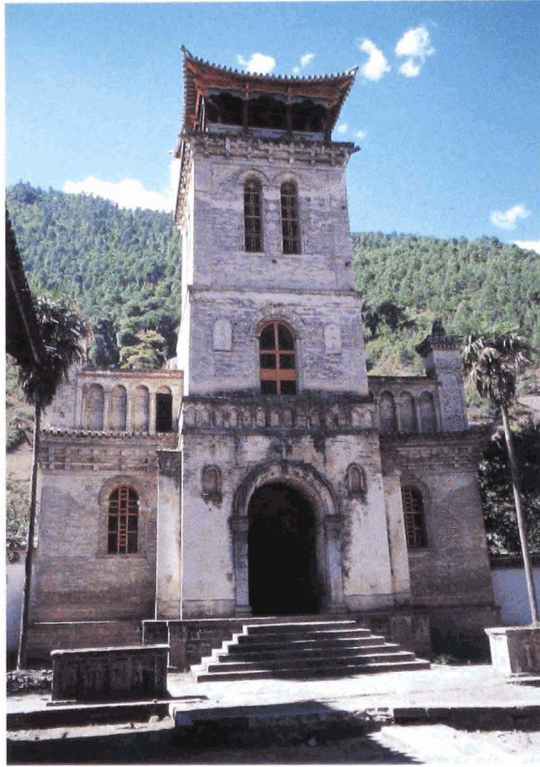
45. Blue poppy *Meconopsis grandis* at 3500m in East Tibet.



46. Blue poppy *Meconopsis integrifolia* at 4300m in Sichuan.



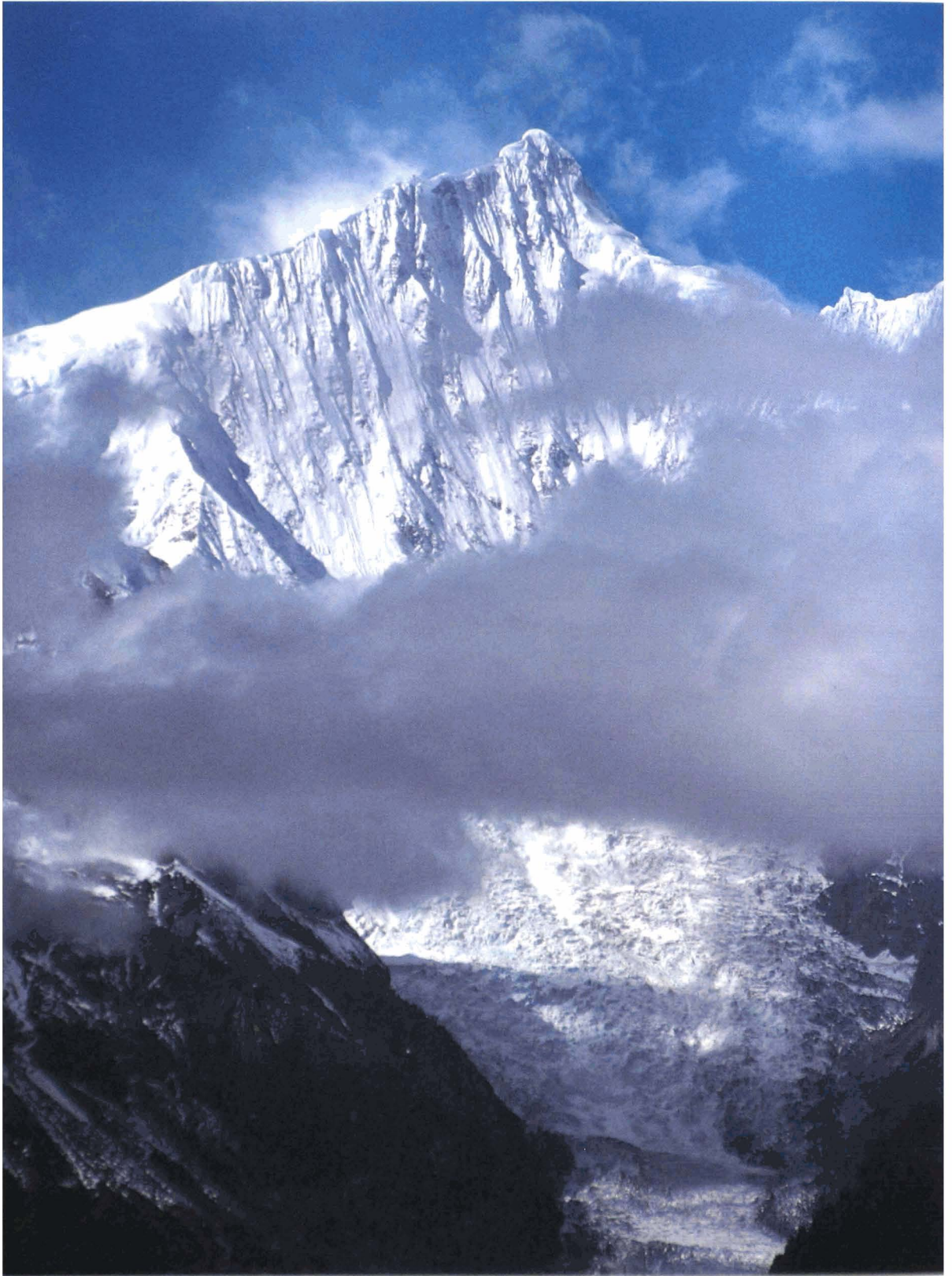
47. Blue poppy *Meconopsis betonicifolia* at 3500m in East Tibet.



48. Catholic church at Tsuchung built in 1906, Mekong valley. GC



49. Tibetan pilgrims walking around holy Meili Xueshan, GC



50. The E Face of sacred Kawagebo 6740 of Meili Xueshan. GC



51. The NW Face of Kawagebo 6740m of Meili Xueshan. GC



52. The E Face of Mianzimu 6054 of Meili Xueshan. GC



53. The E Face of Jiaren-an 5470m of Meili Xueshan. GC



54. The N Face of Zharachoni 5429m of Baimang Xueshan. GC



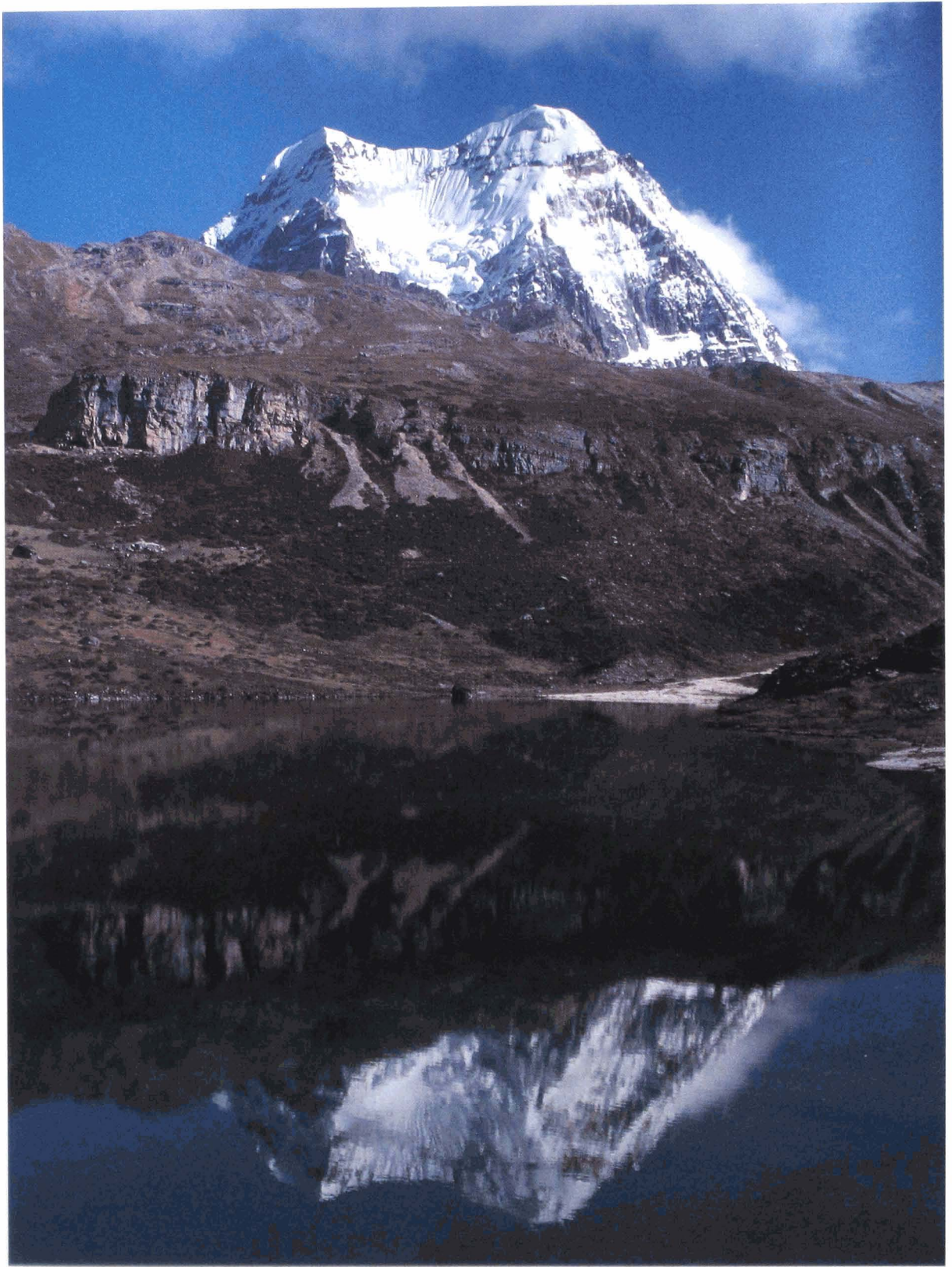
55. The W Ridge of Yulong Xueshan & the Upper Yangtze, Yunnan



56. The E Face of Yangmai yong 5958m of Gongga Xueshan. WS



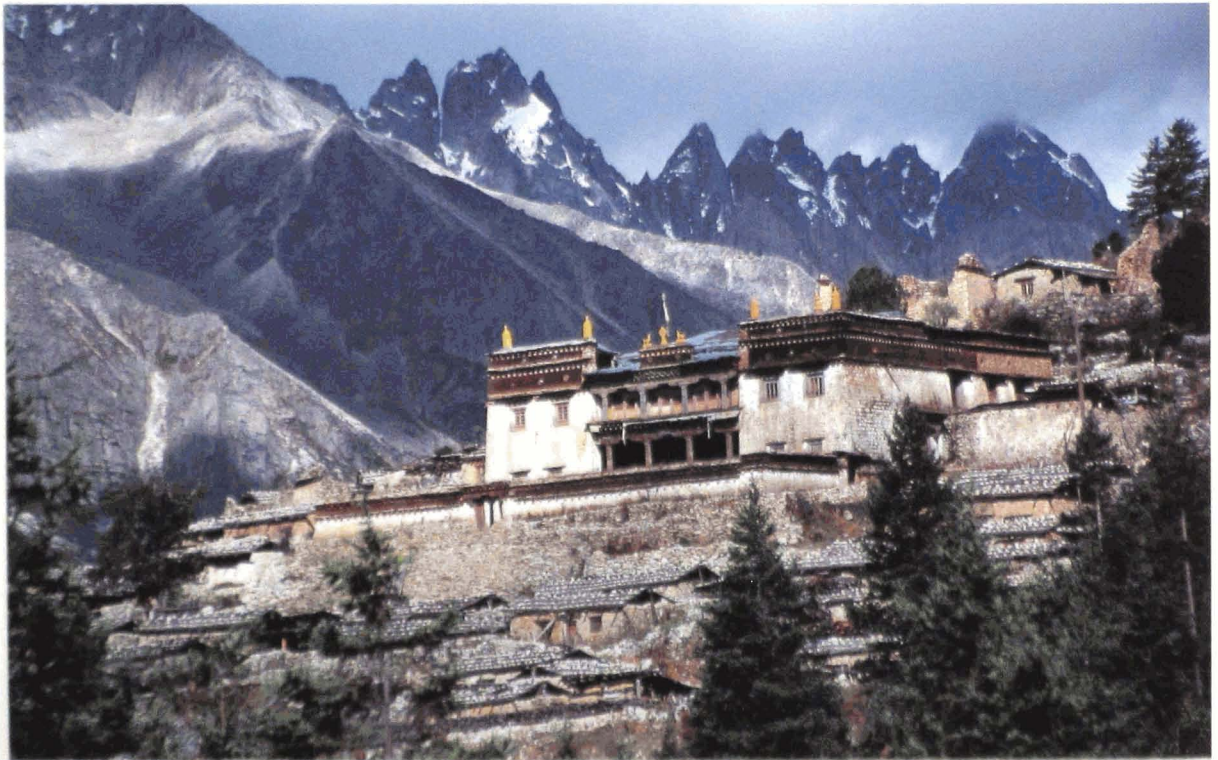
57. The E Face of Yulong Xueshan, N of Lijiang, Yunnan.



58. The E Face of Xiannairi 6032m of Gongga Xueshan. WS



59. The W Face of Genyen 6204m (right) and 5965m unnamed peak (left). WS



60. Rengo Monastery with 600 years history near Genyen. WS



61. The S Face of Yangmolang 6060m, E of Batang. WS



62. Heaven lake Yamouchoken 4800m, S of Yangmolang. WS



63. Zhopu Pasture & the S Face of Jarjinjabo rock peak 5382m. WS



64. The N Face of Xiashe 5833m, S of Jarjinjabo massif. WS



65. The N Face of Chola Shan I 6168m, S of Lake Xinluhai. WS



66. Lake Xinluhai 3800m & Chola Shan massif. WS



67. The S Face of Haizi Shan (Ja-ra) 5820m & Tagong Gompa. WS



68. The W Face of Baihaizi Shan 5924m of Lamo-She massif. WS



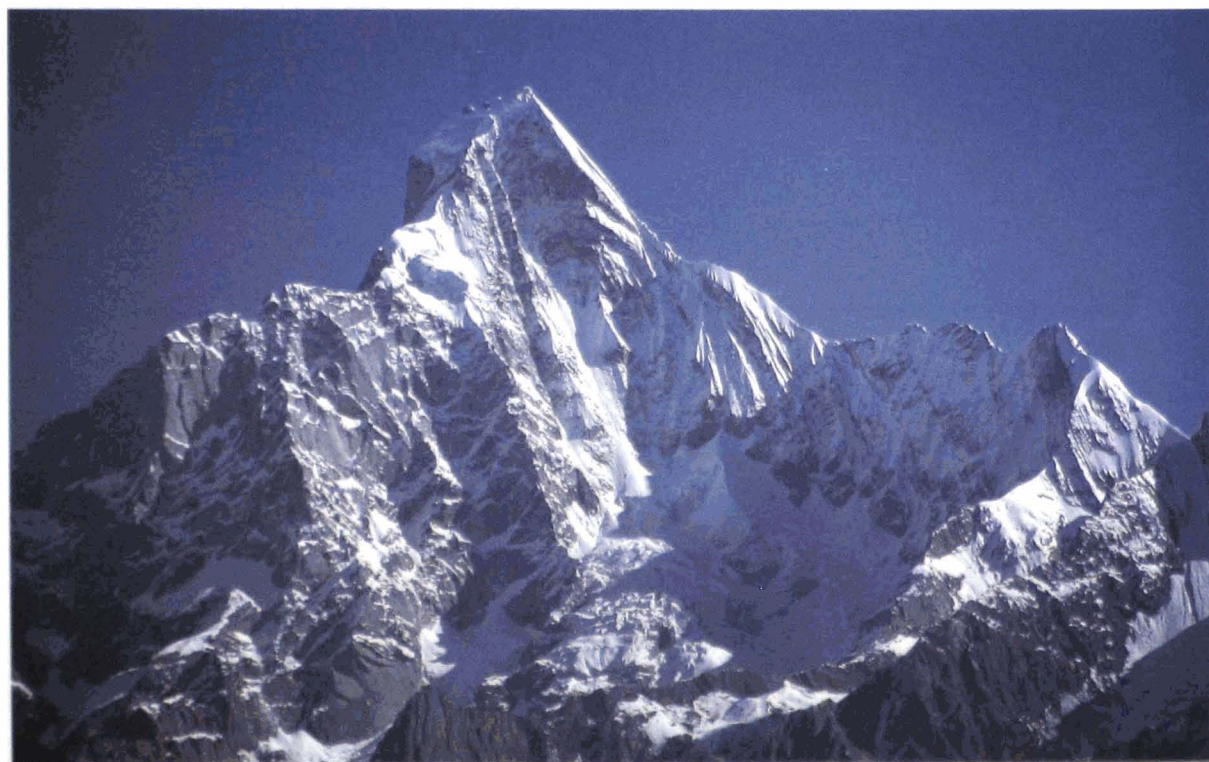
69. Panorama of Minya Konka satellite peaks from Minya Konka NW ridge. WS
The S Face of Glosvenor 6376m, Jiaz 6540m, Mt. Edger 6618m from left.



70. The W Face of Zhongshan 6886m, Minya Konka satellite peak. WS



71. The W Face of Minya Konka 7556m from Zimei Pass. WS



72. The S Face of Mt. Siguniang 6250m, Qonglai Mountains. WS



73. The E Face of 5466m rock peak, Qonglai Mountains. WS



74. The N Face of 5260m rock peak, Qonglai Mountains. WS

East of the Himalayas: (Page 84~85)**Nyainqentanglha East:**

Nyainqentanglha East in Eastern Tibet - 6000m Peaks and Glaciers (Page 86~87)

Nyainqentanglha East - South of Yigong Tsangpo (Page 88~89)

Nyainqentanglha East - Central Part - Eastern Tibet (Page 90)

Unvisited Glaciers & Mountains north of Bomi. (Page 91)

Kangri Garpo Range:

Eastern Kangri Garpo Mts. (Page 92~93)

Western Kangri Garpo Mts. (Page 94~95)

Hengduan Mountains (1) Deep Gorge Country:

Hengduan Mountains - Deep Gorge Country (Page 96~97)

North Frontier of Myanmar and Hkakabo Razi (Page 98)

North Myanmar - High Passes & Approach to Hkakabo Razi (Page 99)

Baxoila Ling - Yangbayisum (Page 100)

Baxoila Ling - PK 6146 & 6005 (Page 101)

Damyon & Mekong-Salween Divide (Page 102)

Meili Xueshan (Page 103)

Yunling - North of Deqen (Page 104)

Yunling - Baimang Xueshan (Page 105)

Yulong Xueshan & Haba Xueshan (Page 106)

Hengduan Mountains (2) West Sichuan Highland:

Jarjinjabo, Xiashe & Hati Massif (Page 107)

Shaluli Shan North, Chola Shan - Gannga - Gongkala Shan (Page 108)

Dangchenzhengla-Yangmolong Area (Page 109)

Genyen Massif (Page 110)

Gongga Xhueshan (Page 110)

Haizi Shan (Ja-ra) - Daxueshan Range (Page 111)

Lamo-she Massif - Daxueshan Range (Page 111)

Minya Konka Massif - Daxueshan Range (Page 112)

Mt. Siguniang & Qonglai Mountains (Page 113)

Xuebao Ding - Minshan Range (Page 114)

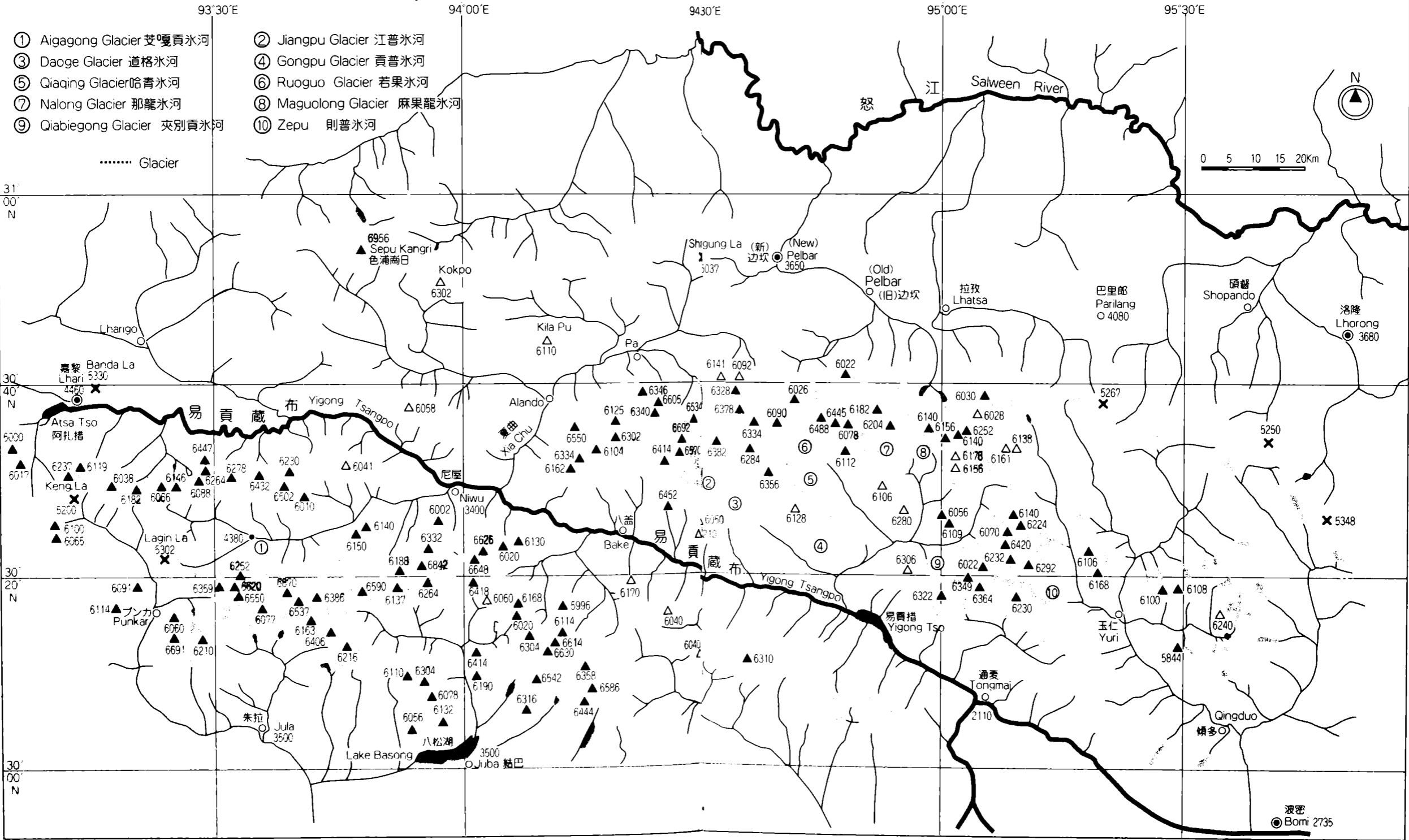
東チベット・念青唐古拉山脈東部
 -6,000m峰および氷河分布-
Nyainqentangha East in Eastern Tibet
 -6,000m Peaks and Glaciers-

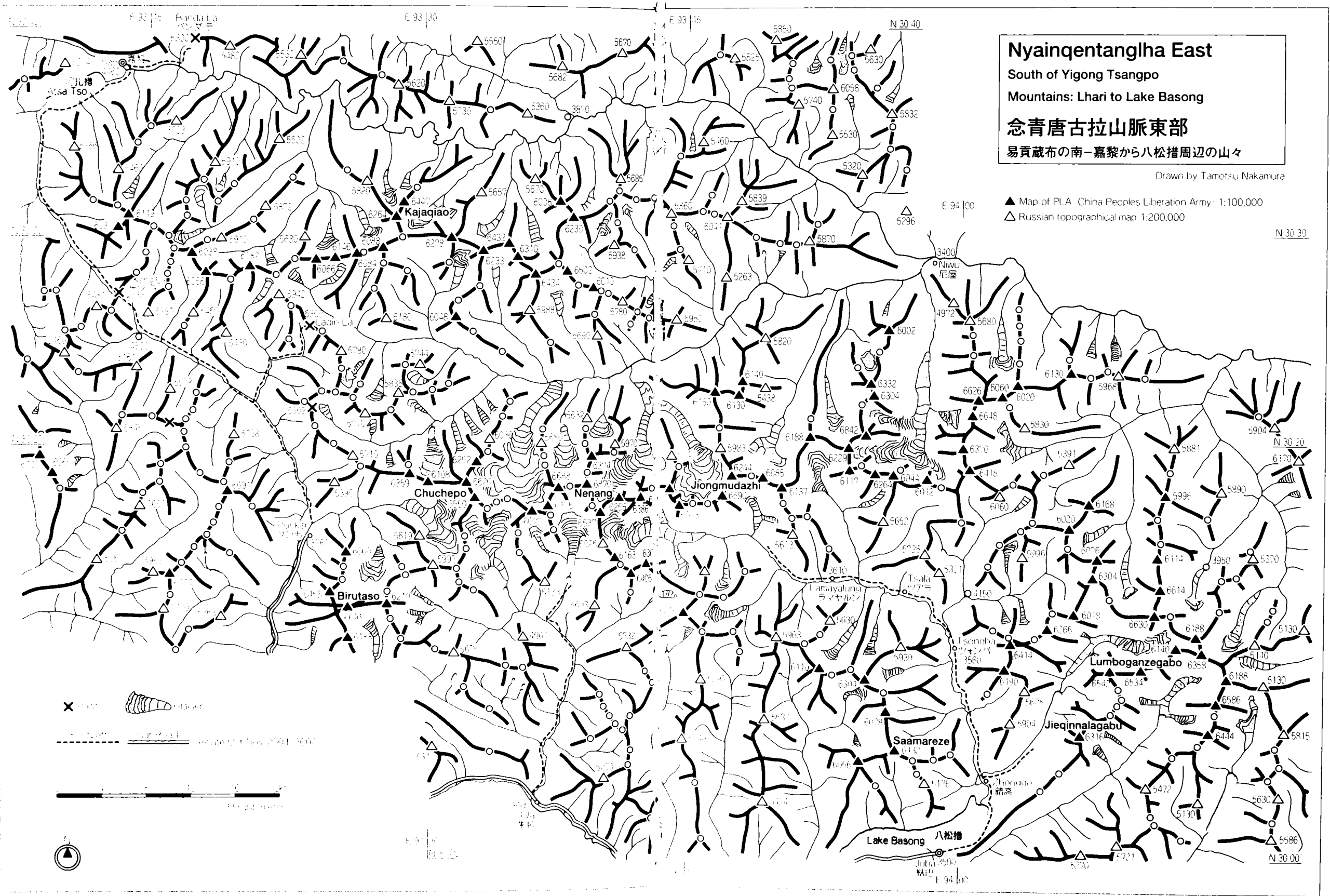
Drawn by Tamotsu Nakamura

▲.....Map of PLA (China Peoples Liberation Army) 1:100,000
 △.....Russian topographical map 1:200,000
 ✕.....Pass Height : meter

- ① Aigagong Glacier 艾嘎貢冰河
- ② Jiangpu Glacier 江普冰河
- ③ Daoge Glacier 道格冰河
- ④ Gongpu Glacier 貢普冰河
- ⑤ Qiaqing Glacier 恰青冰河
- ⑥ Ruoguo Glacier 若果冰河
- ⑦ Nalong Glacier 那龍冰河
- ⑧ Maguolong Glacier 麻果龍冰河
- ⑨ Qiabiegong Glacier 夾別貢冰河
- ⑩ Zepu 則普冰河

..... Glacier





Nyainqentanglha East
 South of Yigong Tsangpo
 Mountains: Lhari to Lake Basong
念青唐古拉山脉东部
 易貢藏布の南-嘉黎から八松措周辺の山々

Drawn by Tamotsu Nakamura

▲ Map of PLA China Peoples Liberation Army 1:100,000
 △ Russian topographical map 1:200,000

N 30 30

E 94 00

E 93 36

E 93 30

N 30 40

N 30 20

N 30 00

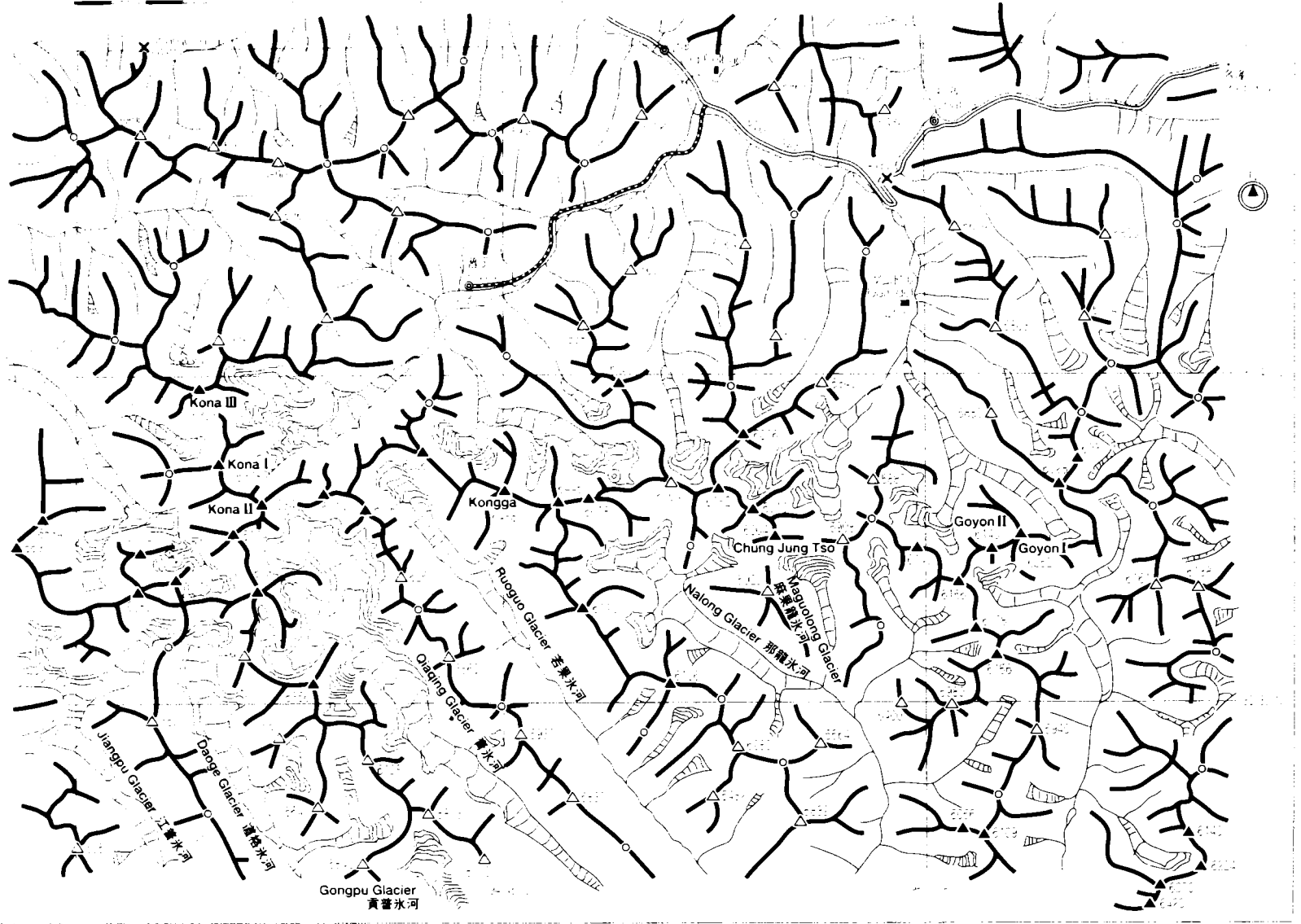
E 94 00

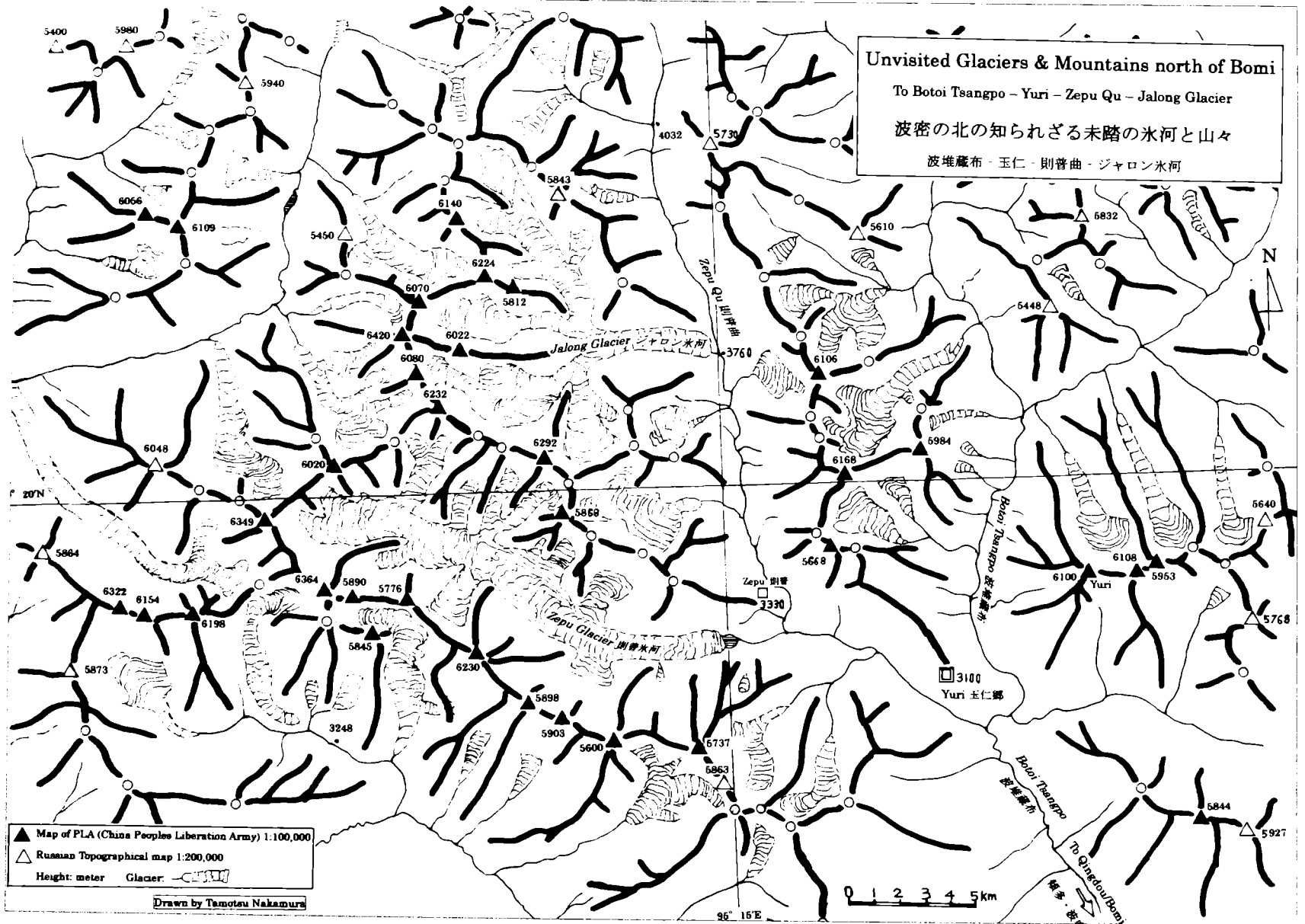
E 94 00

E 94 00

東子ベツ・念青唐古拉山東部一中央山塊
Nyainqentanglha East·Central Part-Eastern Tibet

▲ 氷山 (Glacier)
△ 氷山 (Glacier)



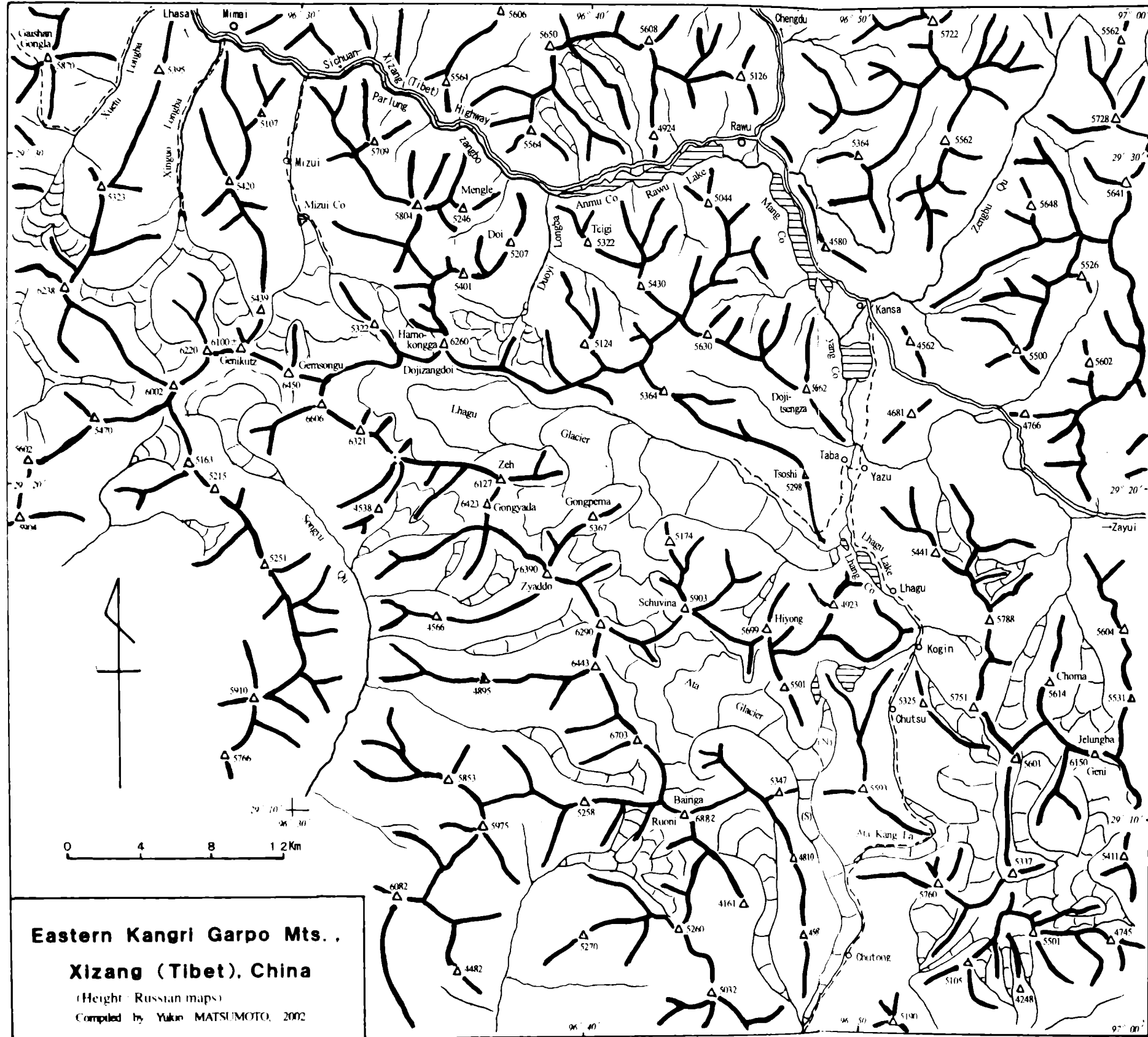


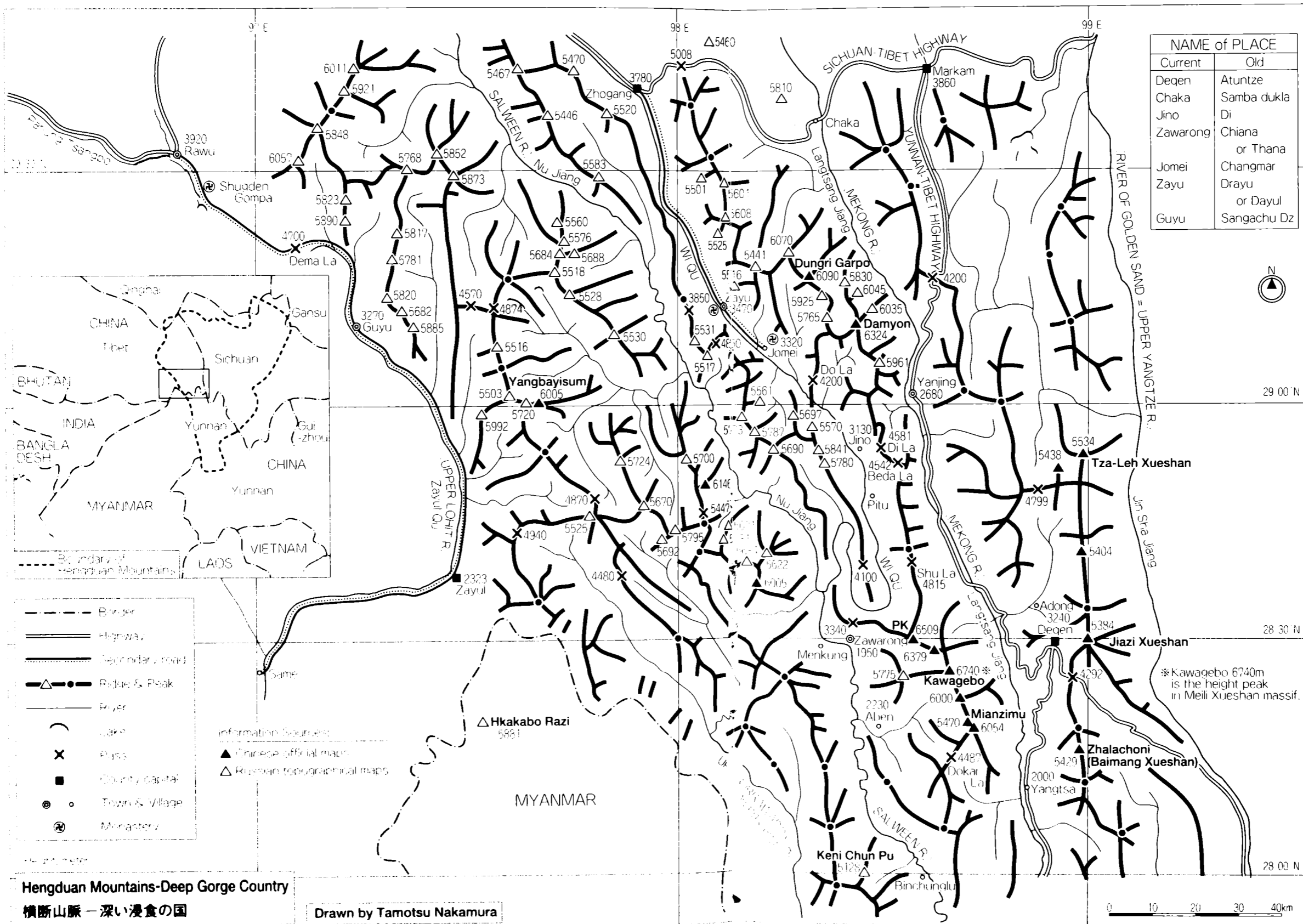
Unvisited Glaciers & Mountains north of Bomi
 To Botoi Tsangpo - Yuri - Zepu Qu - Jalong Glacier
 波密の北の知られざる未踏の氷河と山々
 波堆藏布・玉仁・則普曲・ジャロン氷河

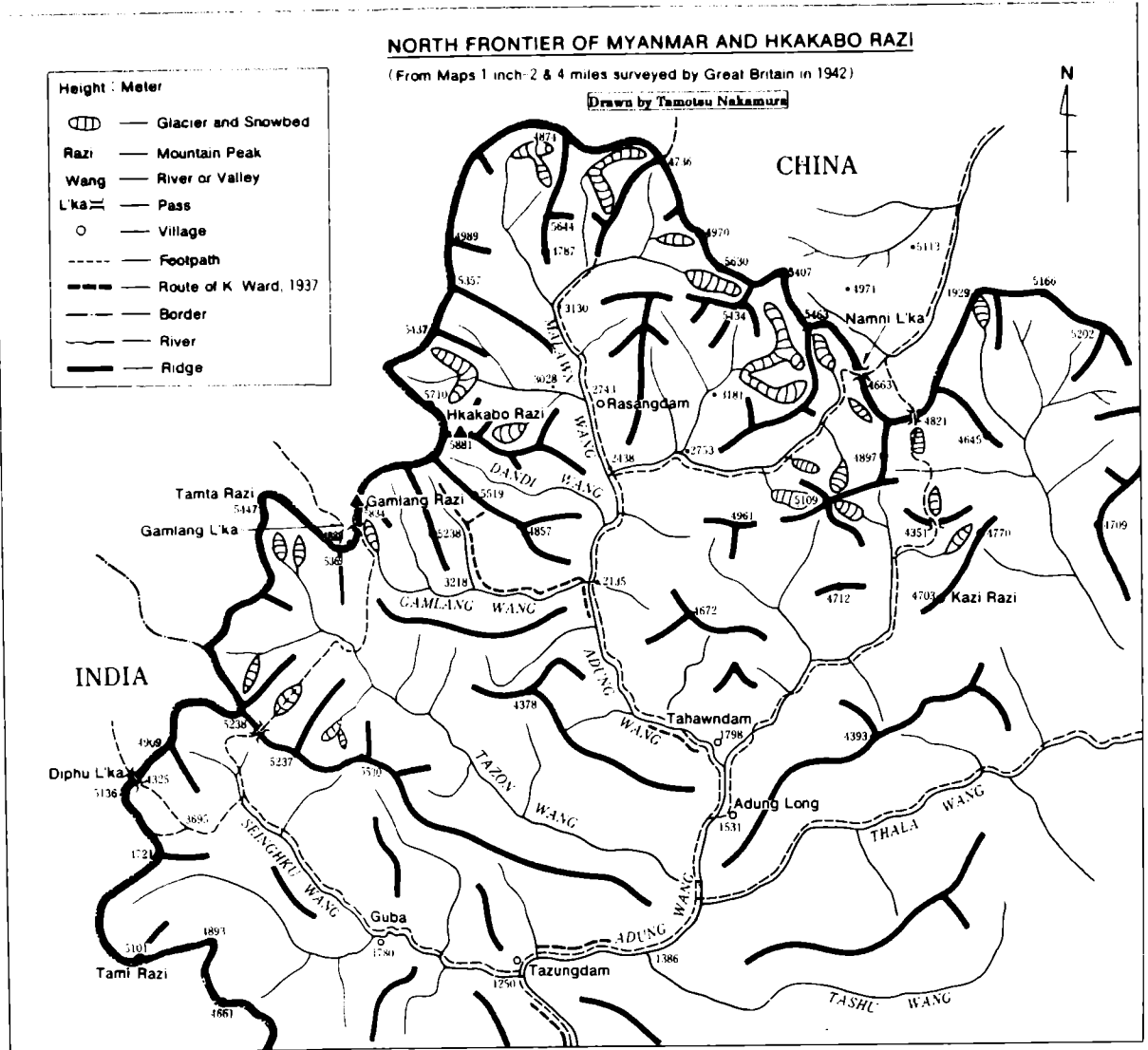
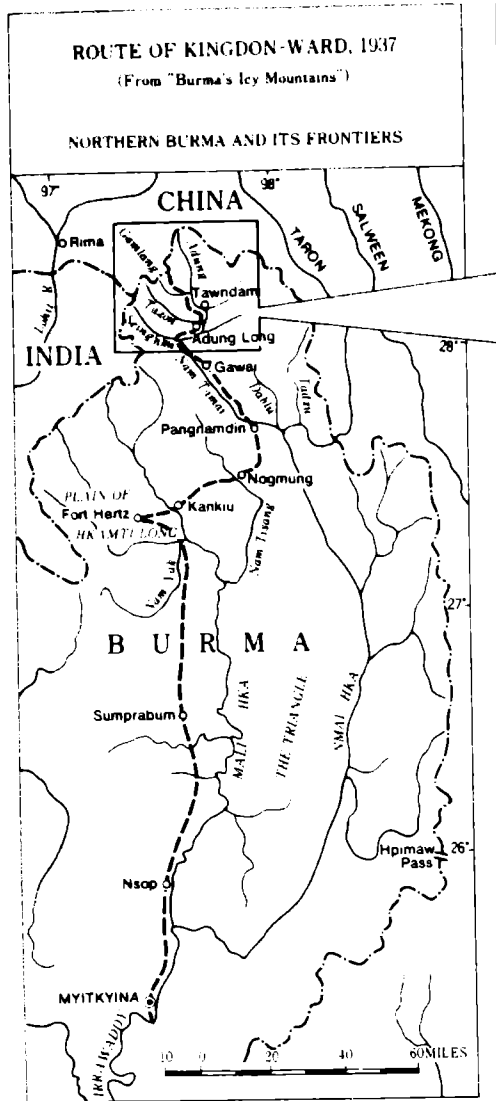
▲ Map of PLA (China Peoples Liberation Army) 1:100,000
 ▲ Russian Topographical map 1:200,000
 Height: meter Glacier:

Drawn by Tamotsu Nakamura

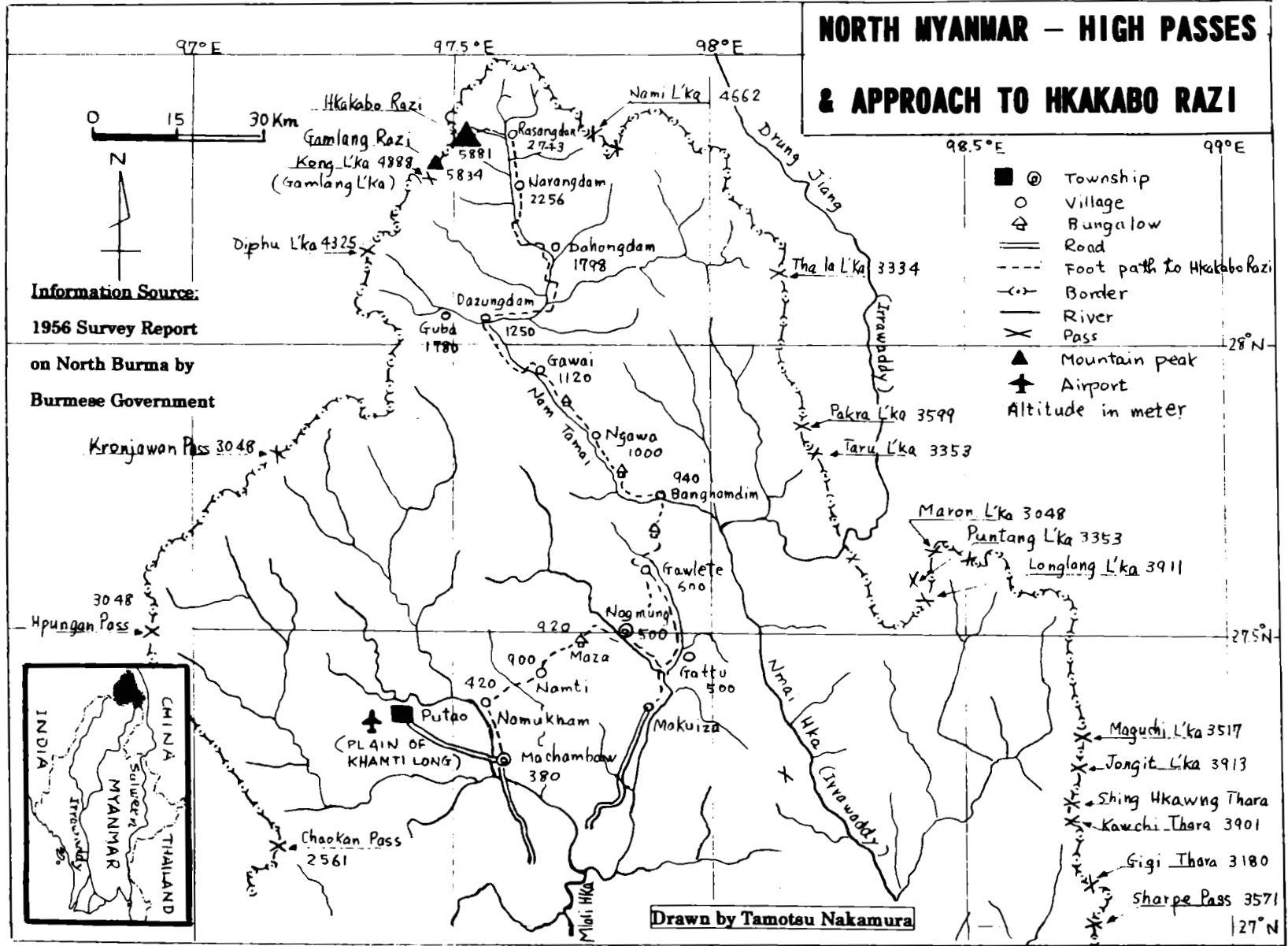
(Note: Height of Ruoni and 6606m peak are based on Chinese map. All other peaks are based on Russian maps.)







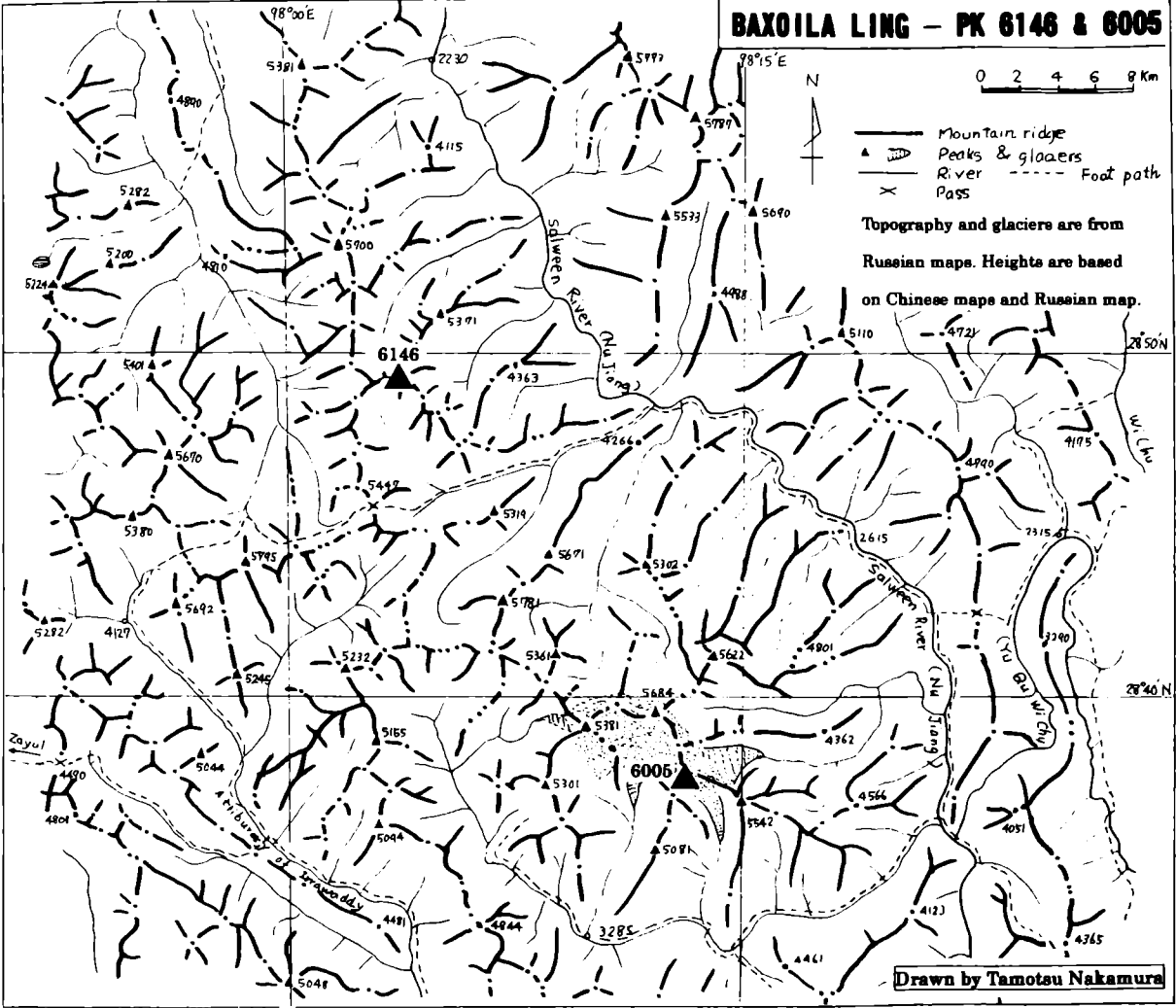
NORTH MYANMAR – HIGH PASSES & APPROACH TO HKAKABO RAZI



Drawn by Tamotsu Nakamura



BAXOILA LING - PK 6146 & 6005



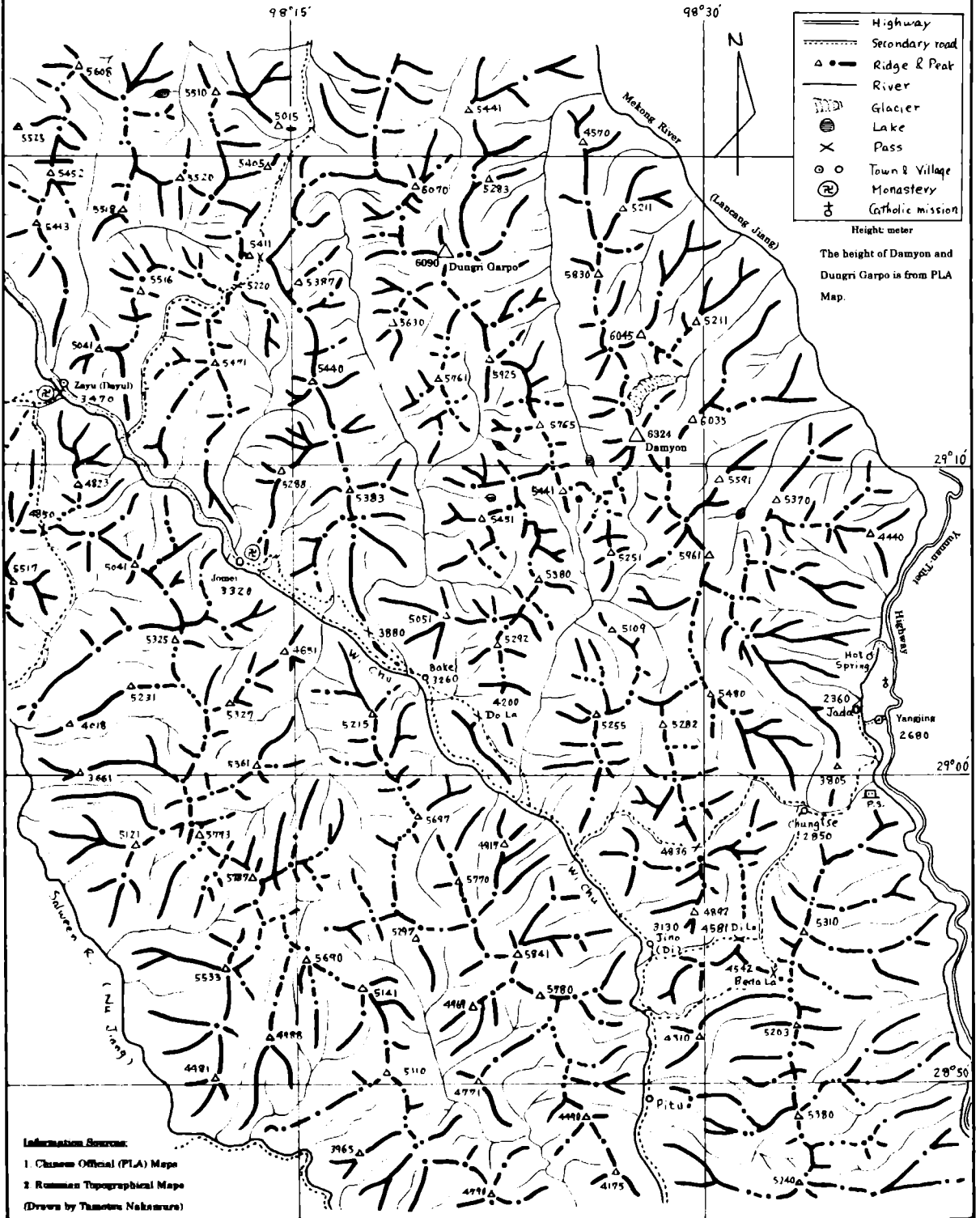
DAMYON & MEKONG-SALWEEN DIVIDE

0 2 4 6 8 10 Km

	Highway
	Secondary road
	Ridge & Peak
	River
	Glacier
	Lake
	Pass
	Town & Village
	Monastery
	Catholic mission

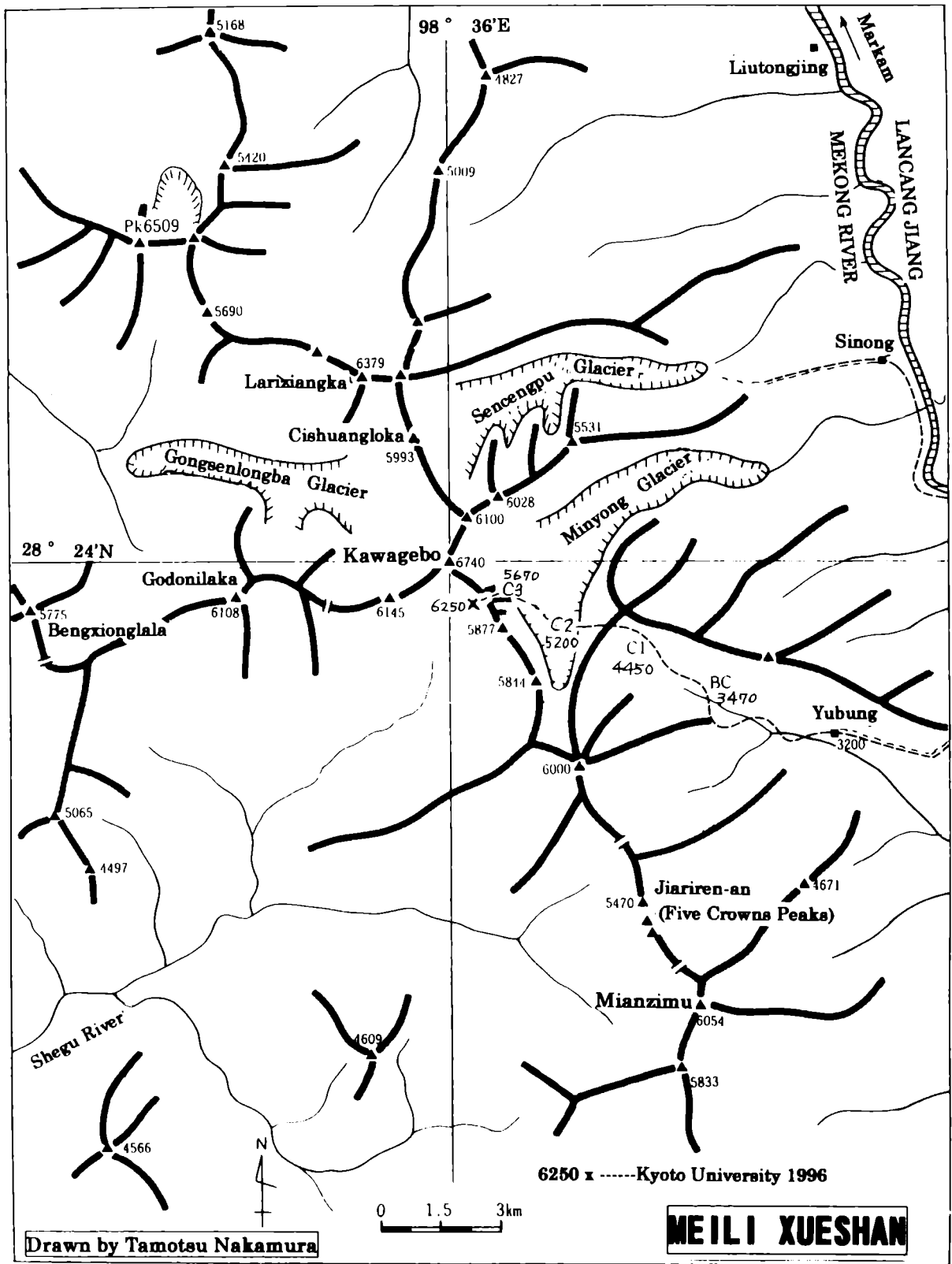
Height: meter

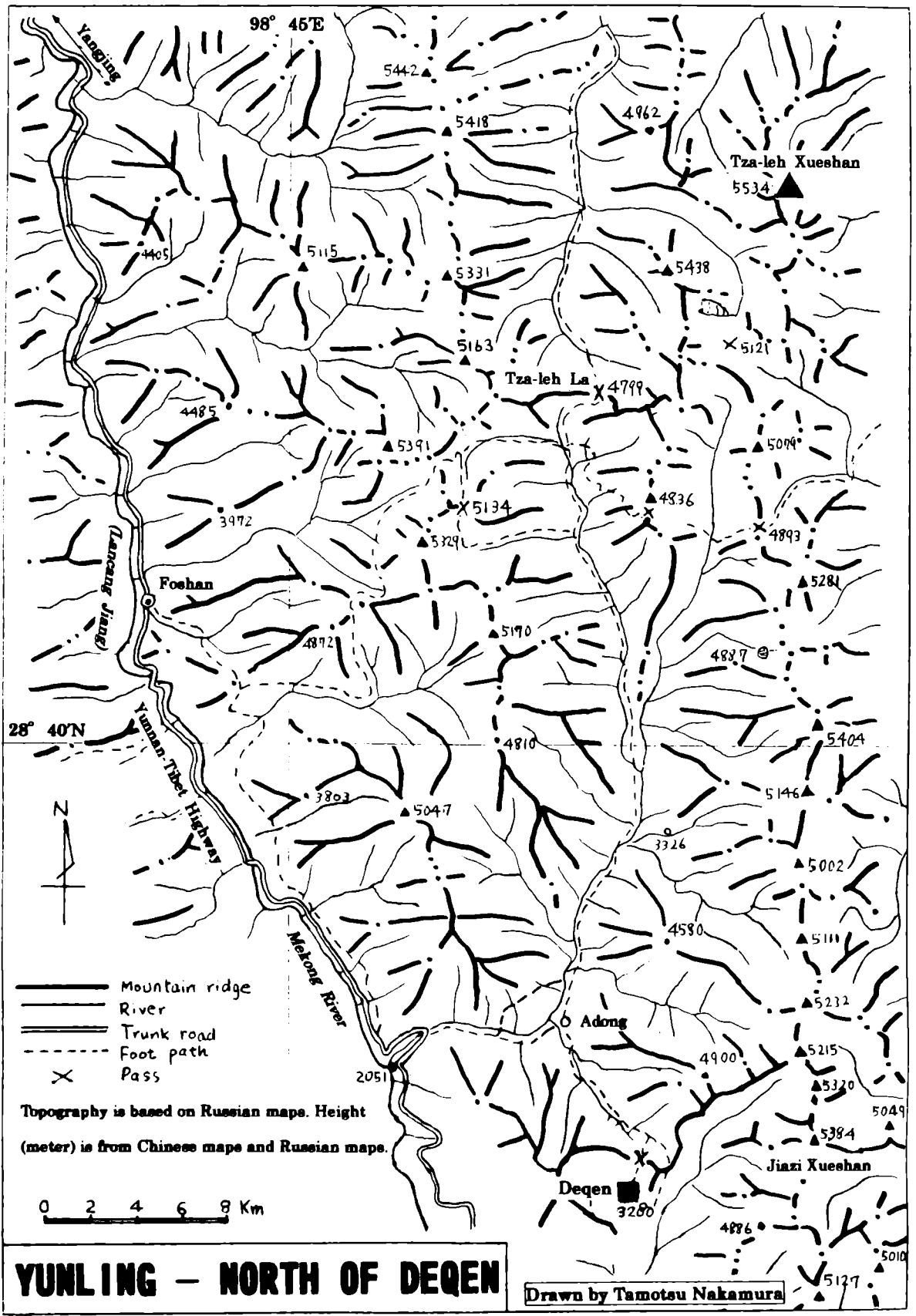
The height of Damyon and
Dungri Garpo is from PLA
Map.



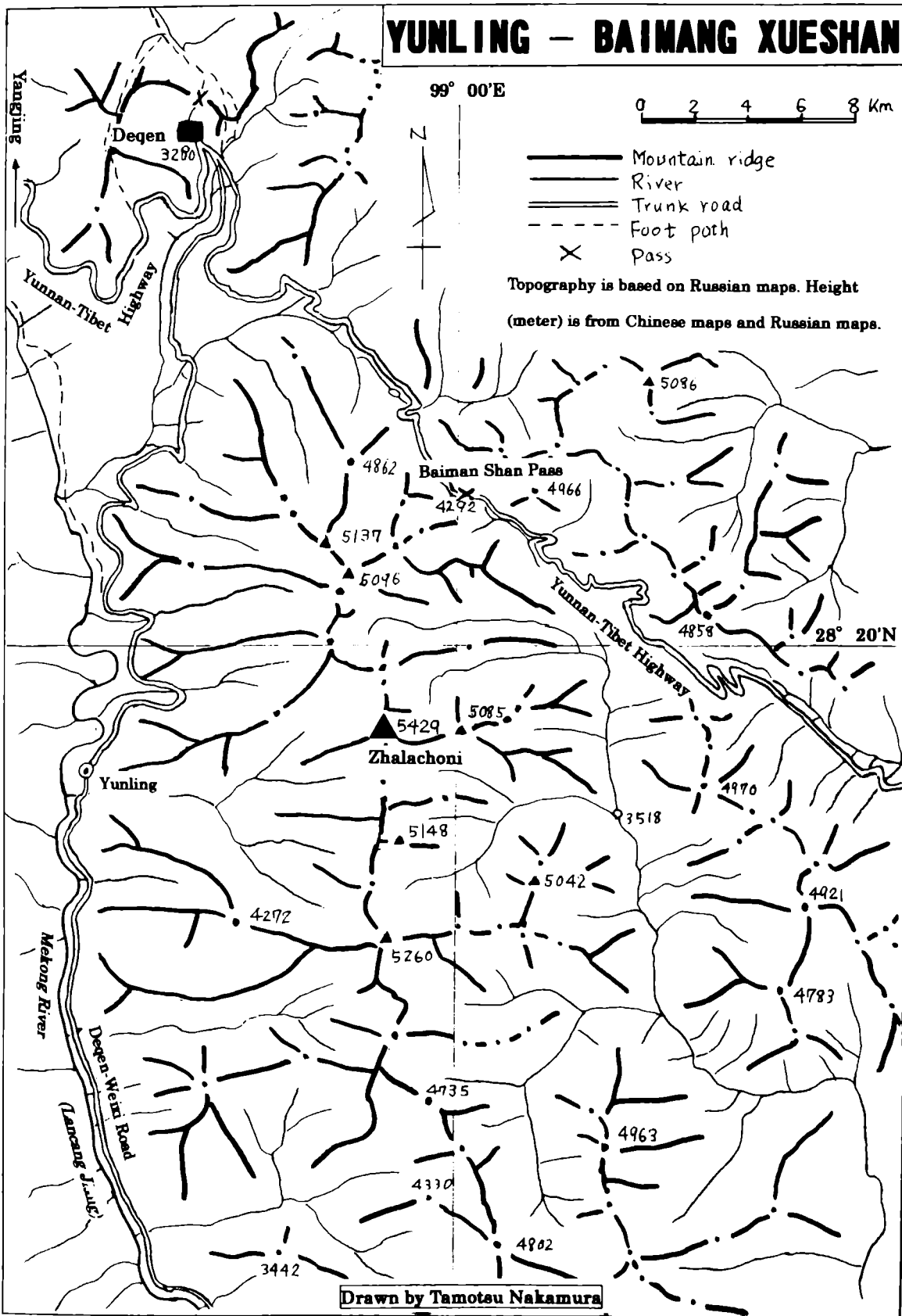
Information Sources:

1. Chinese Official (PLA) Maps
 2. Russian Topographical Maps
- (Drawn by Tamotsu Nakamura)

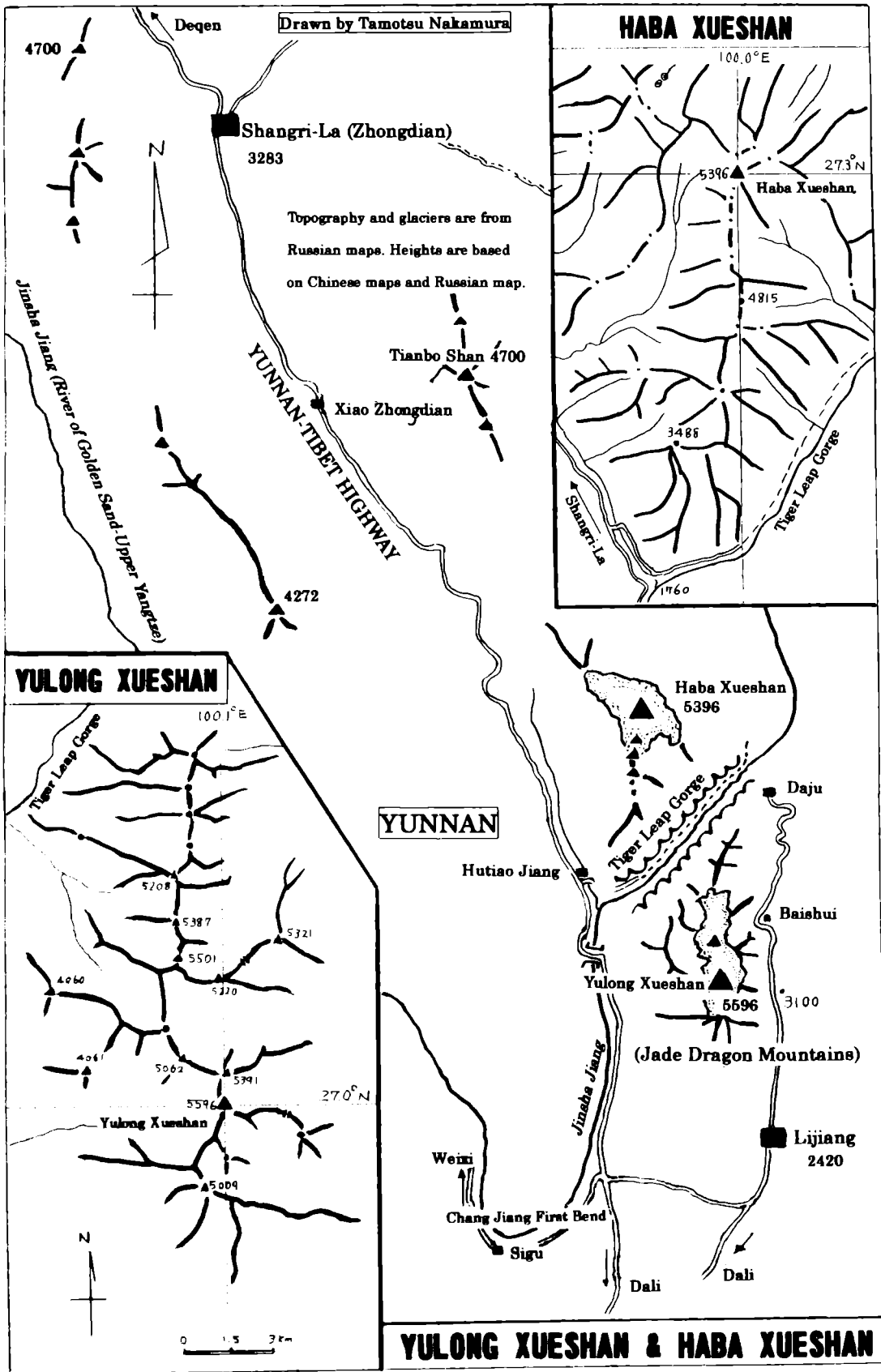


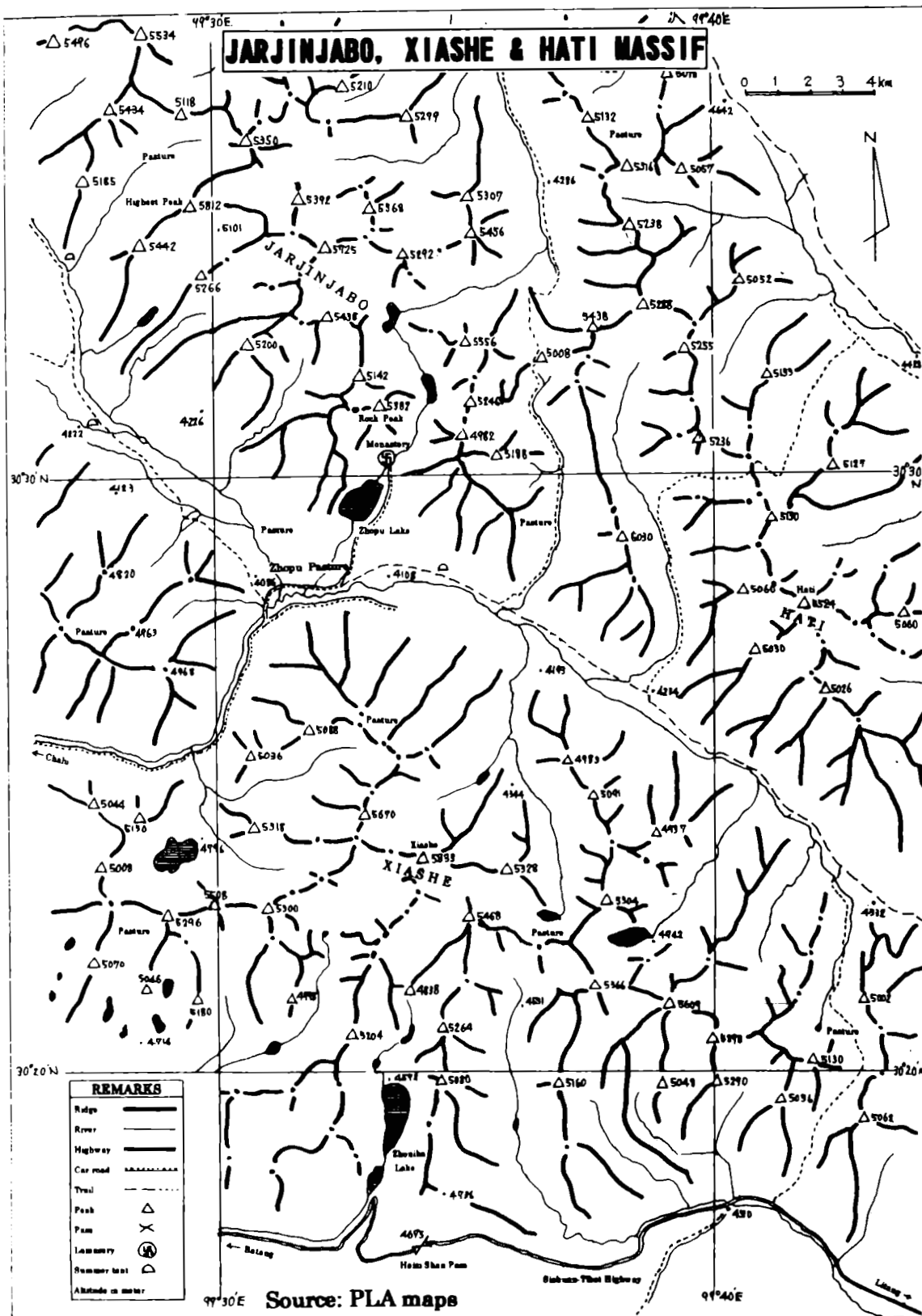


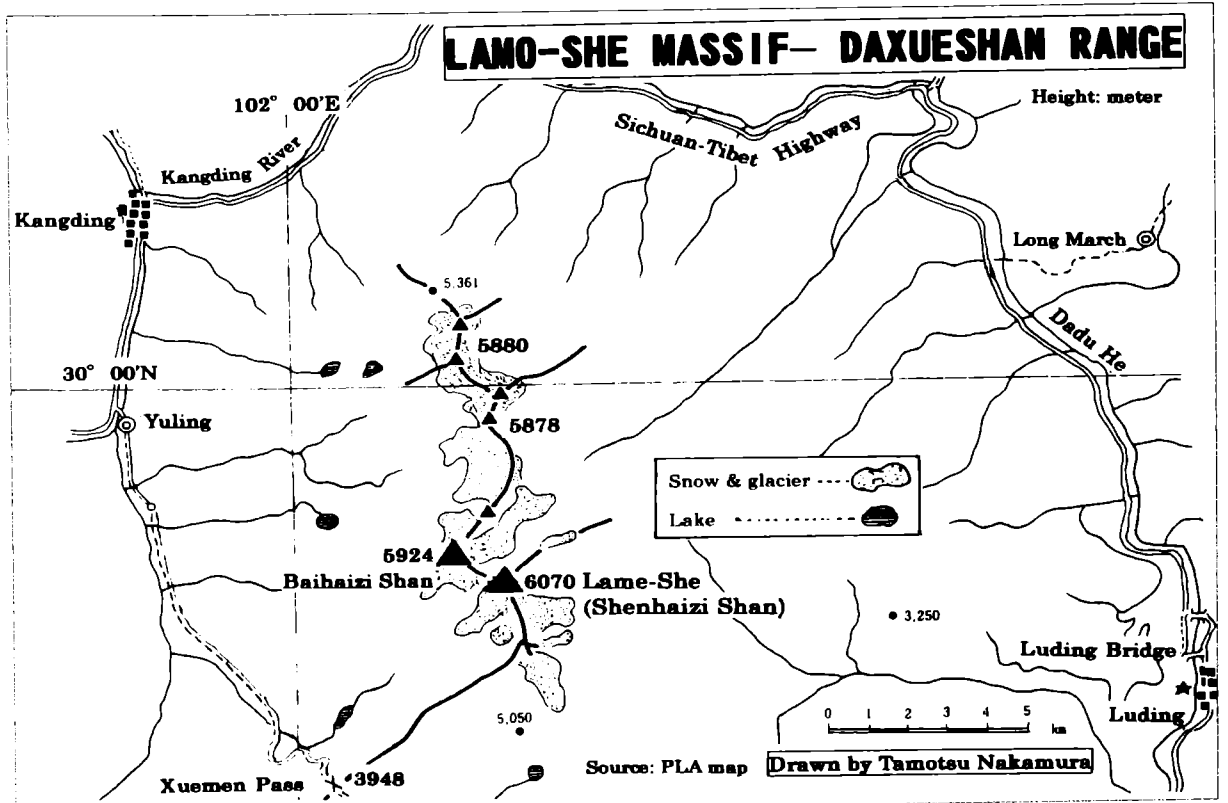
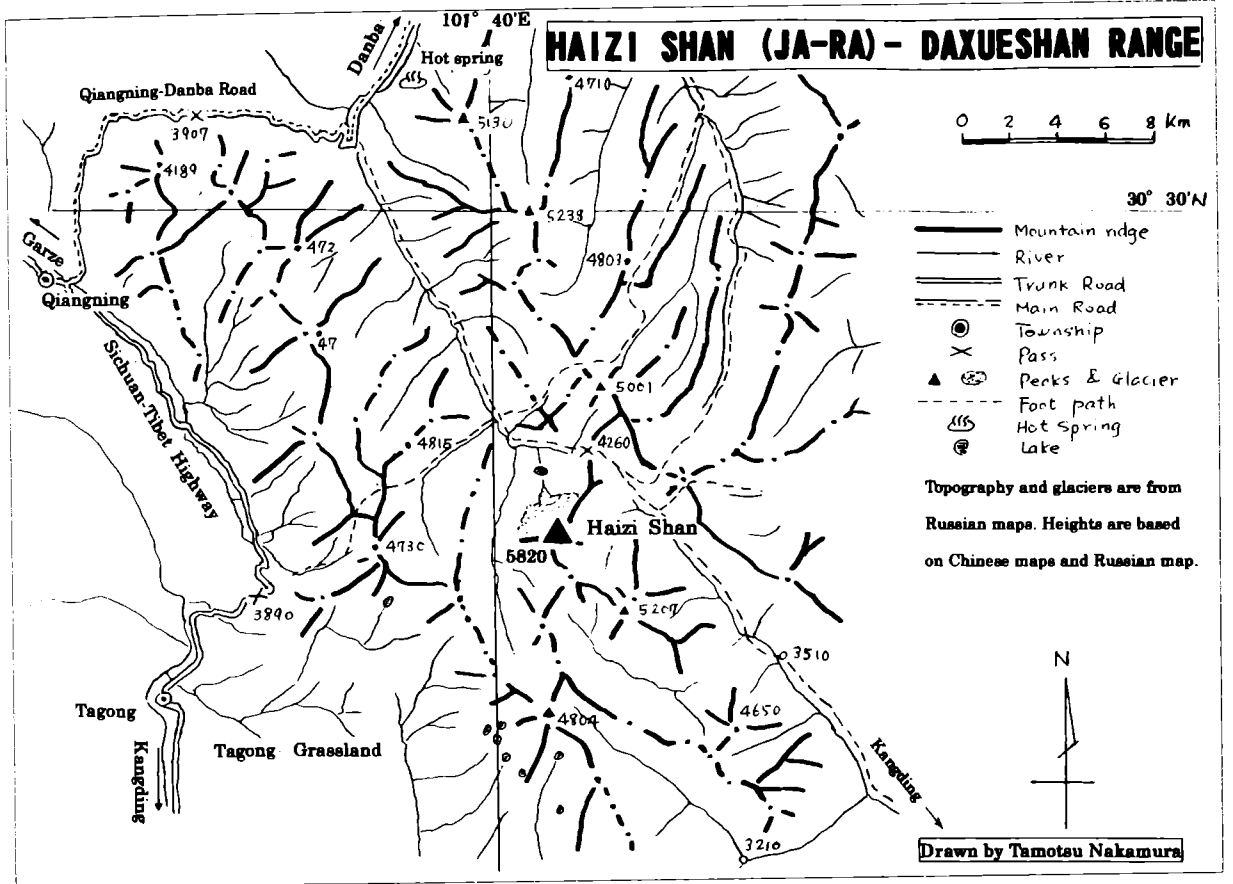
YUNLING - BAIMANG XUESHAN



Drawn by Tamotsu Nakamura







MT. SIGUNIANG & QONGLAI MOUNTAINS

Drawn by Tamotsu Nakamura

Li Xian
1876

Information Source

1: 60,000 and 1: 100,000 maps of
China People's Liberation Army

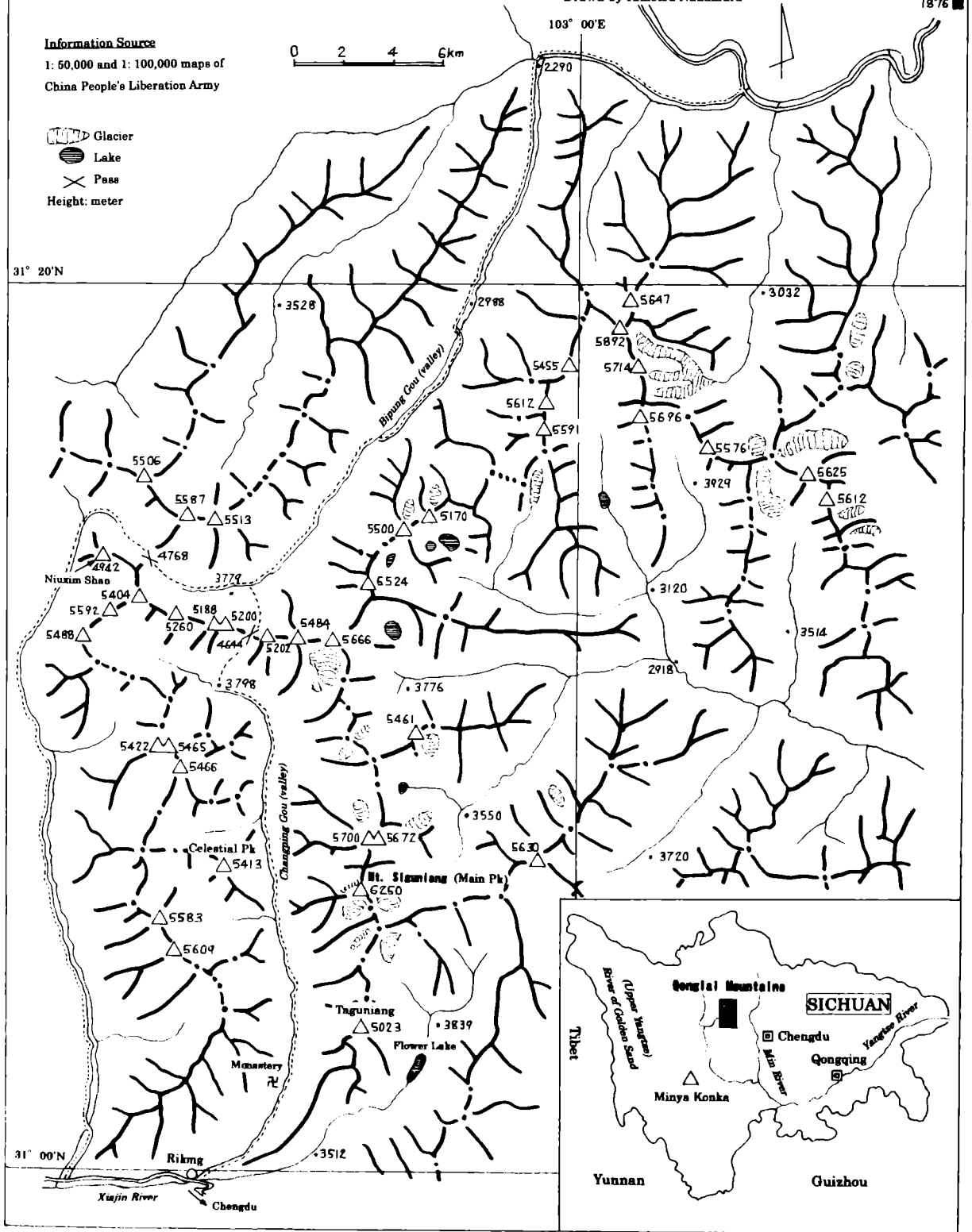
0 2 4 6km

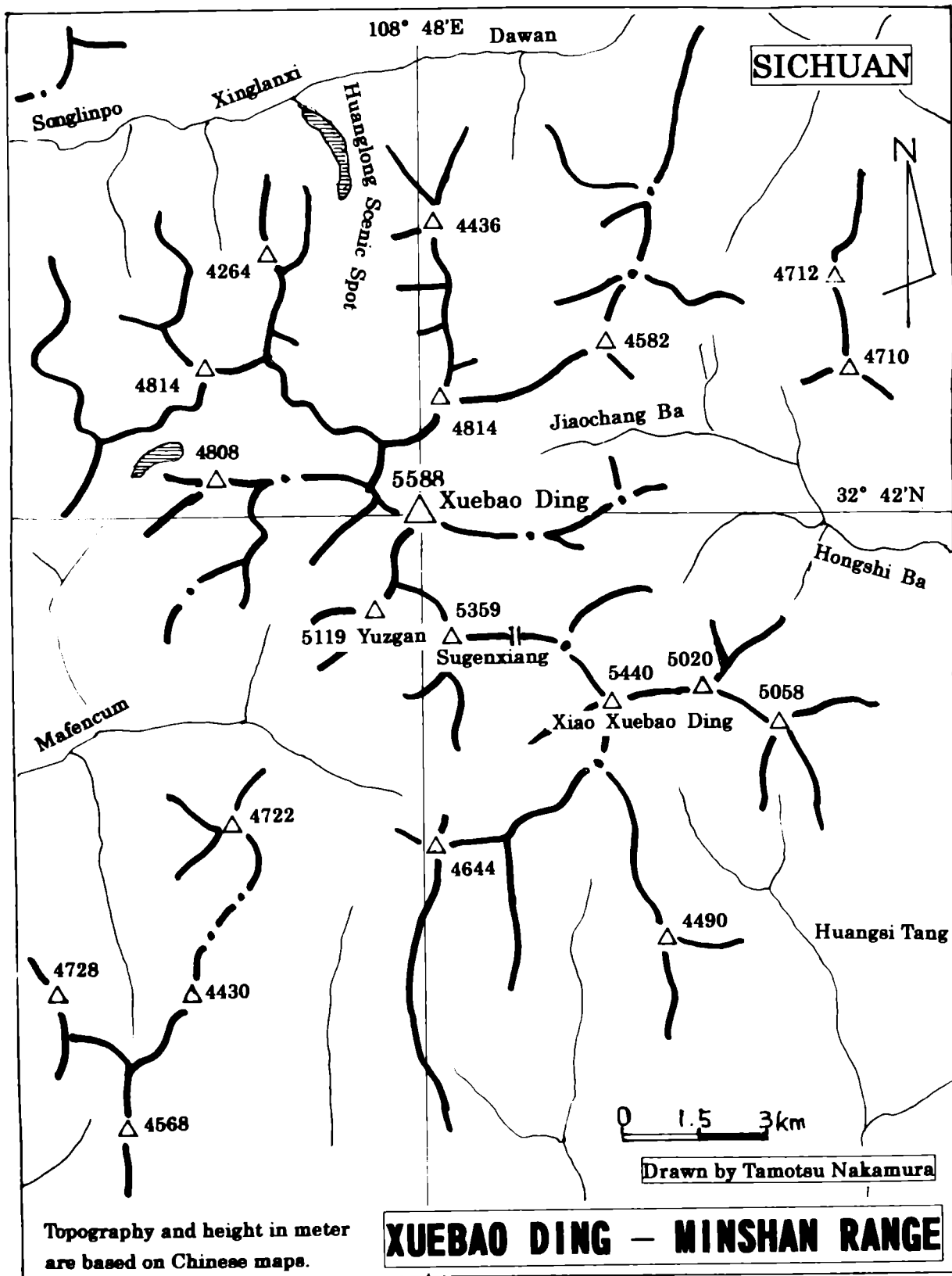
103° 00'E

N

-  Glacier
-  Lake
-  Pass
- Height: meter

31° 20'N







THE JAPANESE ALPINE CLUB