ECONOMIC NOTES ON EASTERN TIBET

Oliver Coales, H.B.M. Consular Service

Map following p. 264.

THE following notes are supplementary to an account of a journey in Eastern Tibet that appeared in the April number of the *Journal*, and accompany the map which is now published.

In 1917 the Chinese had control of a district of approximately 80,000 square miles in area (exclusive of Koko Nor). From a calculation I made then, on the basis of the number of families in the districts into which the Chinese had divided the country, I estimated the population to be about 450,000 persons, an average of less than six to the square mile. Probably more than one-tenth belonged to the celibate lama priesthood. Chinese settlers and half-castes living as Chinese were not more than 25,000 and lived almost entirely at Tachienlu, in the districts near that town and at Batang. There were also about 7000 Chinese soldiers in garrison. During 1918 the Dalai Lama recaptured Ruvoch'e, Ch'amdo and Draya west of the Yangtze.

The three principal frontier marts on the Chinese or eastern side of Tibet are Tangkar (Donkyr) in Kansu to the west of Sining, Tachienlu and Atuntzu in the north-west of Yunnan. The first, Tangkar, is outside the subject of these notes, but a few words may be of interest. This busy little town has been vividly described by Abbé Huc in his 'Travels in Tartary.' The road from Tangkar to Tibet joins the north road from Tachienlu at Jyekundo. Towards the east one road leads to Lanchow, the capital of Kansu, and another branches off east of Sining and goes through Liangchow across Mongolia to Kweihwacheng, where merchandise is transported to Tientsin. Through Tangkar passes the greater part of the trade between Tibet and North China. The staple commodity is wool, of which some 2,700,000 lbs. are exported annually to Tientsin. In this trade Tangkar completely overshadows Tachienlu, a fact which is partly accounted for by the cheapness of camel transport across Mongolia. As a matter of history it may be mentioned that up to the establishment of the Manchu dynasty in China and the conquest of Tibet, intercourse between the two countries was mainly carried on by this and other roads through Koko Nor and not through Tachienlu. Other exports through Tangkar besides wool are lambskins and salt, and the principal import is barley, a necessity owing to Koko Nor being a pastoral country.

Atuntzu, a small town in the extreme north-west of Yunnan and due south of Batang, is important because it lies on a road leading from the principal towns of Yunnan to Batang and to the districts south-west of Ch'amdo. Its trade is comparatively small, because Yunnan supplies neither tea nor silk and the Tibetan country beyond it is not a pastoral region. The chief export is musk.

Tachienlu owes its importance to the tea and silk which are produced in Szechwan for the Tibetan market. The means of access from the east and west are far less favourable than those of Tangkar. The latter is approached by good mule roads from Kansu, and on the west, though the road to Tibet passes through a very elevated country, there are no passes of great difficulty. On the other hand, the road from Chengtu to Tachienlu crosses a rugged mountainous country involving two steep passes of over 9000 feet altitude, a descent to the Tung River and a climb of 5000 feet to Tachienlu. The road has been improved by the Chinese, much of it being paved with stone slabs, and the ascents of the passes are flights of steps just passable by pack-animals. The Tung River is spanned at Lutingchiao by an iron suspension bridge constructed in the eighteenth century. I mentioned above that Chinese intercourse with Tibet prior to the Manchu dynasty generally passed through Koko Nor. In the earlier histories the route from Szechwan to Tibet always spoken of is a road leading westward from Sungpan, and Tachienlu is not mentioned till the seventeenth century. Locally one hears that the tea carriers formerly used a road along the Tung River westwards to its great bend at Tzutati, and thence into the Tibetan country west of the Cheto pass, finally joining the north road near Dau. The traces of their ironshod poles in the stones are still visible. It may be added that in former days the capital of the King of Chala was not Tachienlu, but a place further to the south-west.

The principal imports into Tibet from China are tea, silks, tobacco, cottons, foreign and native sundries, and rice. The latter is imported for the consumption of the local Chinese and army. Had the Szechwanese, like their countrymen of Kansu, been wheat instead of rice eaters, their attempts at colonization might have been more successful than they have actually proved. The sundries and cotton goods are also generally required by the Chinese, the Tibetans, in place of the latter, preferring woollens, locally woven or from Lhasa, or, if wealthy, silk. Tobacco is a luxury which every Tibetan now requires

Tea and silk are the bulk of the import trade. As far as the production and transport of tea to Tachienlu are concerned, the tea trade has been exhaustively described by Sir A. Hosie in his 'Journey to the Eastern Frontier of Tibet, 1905,' and by other travellers. The trade has suffered greatly from the continued hostilities between China and Tibet, and imports have fallen off in recent years. To the Tibetans however tea is a necessity of life, and they have put no artificial restrictions on its importation. Judging by inquiries made at Tachienlu, Chinese tea holds its own in spite of political difficulties and is not being ousted by Indian products. The competition of India tea is not alleged as a reason for the decreased use of China tea, and probably the Tibetan trade is too small to make it worth the while of Indian planters to specialize in it.

Silk goods imported through Tachienlu are silk piece-goods, katas or ceremonial scarves, coloured scarves, and cords. They are made in

Chengtu specially for the Tibetan market. In China the favourite colour in dress is blue, but the Tibetan prefers maroon, dark red, or yellow, and these colours predominate in the silks which are imported. In figured cloths all the Chinese designs are popular, but the weavers also manufacture many Tibetan styles, bearing figures of Buddhas, pagodas, or religious emblems. The best qualities, amongst them brocades in gold thread, are fine examples of the weaver's art. The value imported in 1915 was about £20,000, and that of tea £170,000.

Tibet exports to China musk, gold, wool, skins, and medicines. Musk is the produce of a small deer which is found all over Tibet. It is easily adulterated, and experts are required to purchase it. About half a dozen firms specialize in the trade, which amounted in 1915 to £160,000. It is of sufficient importance in the European scent industry to cause two French firms to maintain themselves at Tachienlu and Atuntzu solely for this commodity. Gold is next in importance to musk. Though much is mined in the country, a large quantity is brought from India through Lhasa to pay for tea and silk. As regards wool, the scarcity caused by the Great War and the higher prices prevailing tempted merchants in recent years to bring down much larger quantities than ever before, but the boom is not likely to continue if prices fall. In former years the wool trade of Tachienlu was a mere fraction of that of Tangkar. The medicines exported are mainly rhubarb and other vegetable drugs for the Chinese market. The most interesting is the curious Chungtsao or insect grass, a dried caterpillar about 2 inches long, which has been killed by a fungus of about the same length growing out of one of its segments. It is supposed to be an excellent restorative to weak constitutions.

At Tachienlu imports and exports change hands from Chinese to Tibetans and *vice versâ*. Till recently the handling of trade in Tibet was done by Tibetans, and though the Chinese are more and more engrossing trade in the occupied districts, that with independent Tibet is still done by Tibetans. In general it is monopolized by merchants of the eastern province, Kham, either private people trading on their own account or on behalf of monasteries, or monasteries themselves. The wealthiest merchants belong to the Horpa States.

The ordinary course of trade is this. A merchant, say at Lhasa, wishing to purchase tea and silk, assembles a caravan of ponies and mules and lades them with Tibetan goods, such as woollen cloth, rugs, incense, foreign sundries from India, and gold and silver in bullion or coin. He proceeds to Tachienlu by the north road through Jyekundo and Kandze, selling his stock as he goes along, so that little reaches Tachienlu. Here he puts up at one of the Tsang or Kwochwang. These are the houses of the local Tibetan gentry, who undertake to entertain the merchants on condition of being their go-betweens and interpreters in dealing with the Chinese. There are commonly said to be forty-nine of these Kwochwang, but there are really only about half that number.

When business is to be arranged, the Kwochwang owner takes the merchant round to the Chinese merchants he wishes to see. In the old days the tea business was a close monopoly of a few Chinese, and the Tibetan, who usually traded with an old-established connection, was practically obliged to take what the seller offered at the latter's price. Circumstances have changed with the decrease of trade and the opening of many new Chinese firms, so that the touting is now on the Chinese side.

The Tibetan now begins to arrange his contracts. The general custom is for the buyer to pay one-half of the price on the spot in cash and to give a promissory note for the remainder. He engages to remit this balance when he next comes to Tachienlu. In the meanwhile he has been paying off old debts and purchasing sundries and silks. Cash in full is generally paid for these. The arrangement of the tea contracts is a long business which may keep the merchant some months in Tachienlu. During this time he is able if he wishes to have silk piece-goods made to his order at Chengtu.

Everything having been settled and his purchases made, the merchant collects the caravan, which has been let out to graze in the mountains, lades it with his silks and sundries, and sets out for the return journey. The tea will not have arrived before he leaves, and he will have to arrange with the Kwochwang landlord for its packing and transport after he has departed.

The tea is brought in day by day from China, and as it comes is repacked and stored till sufficient is collected for a caravan. As delivered in Tachienlu the tea is in packages $3\frac{1}{2}$ feet long, 8 inches wide, and 4 thick, wrapped in bamboo matting. To reform for animal transport three packages are cut in half, the halves placed side by side and wrapped in raw hides, which are tightly stretched and sewn while fresh and damp. A stiff, unbreakable bale, 22 inches square by 8 thick, is thus made. It weighs about 66 lbs., and two or 133 lbs. form one animal's load. Generally all kinds of merchandise for Tibet, whether in boxes or not, are packed in a similar fashion in raw hides.

By the time the tea is ready a caravan of yaks has been hired from one of the firms who specialize in this business, and the tea is loaded on the animals and despatched. Such caravans do not make the whole journey to Lhasa, but are changed every half a dozen stages or so. They are almost always of yaks, and their slow rate of travel and the delays in changing over make the journey to Lhasa a very long one. Mules and ponies are hardly ever used for this purpose, being preferred for more valuable merchandise, such as silk and sundries. The merchant will have arrived in Lhasa long before his tea, and it may be a couple of years from the time he first set out to Tachienlu till the last consignment arrives. As regards the payment of the balance, he will settle this on his next visit to Tachienlu, and Chinese say that defalcation is a very rare occurrence.

In respect of its mineral wealth Tibet is probably the least known

country of the habited world. No scientific geological expedition has ever touched more than the fringe, and over the greater part the geological features are sketched on mere conjecture. Richthofen's Geological Atlas of China gives some general features in South-Eastern Tibet, but only a small portion of his data is taken from direct observation.

The wide distribution of alluvial gold deposits may indicate great wealth of this metal. Gold is found in every part of the country east of the Yangtze River, but not, as far as I have heard, between the Yangtze and the Mekong. The Tibetans have a superstitious objection to removing precious metals from the earth, believing that they contribute to its fertility. The Chinese however are less scrupulous, and their activities have often led to conflicts with the natives, more especially when the gold-bearing sands lie beneath the Tibetan fields. The yield of gold is generally poor, and a Chinese would consider himself unusually fortunate if he made £150 to £200 a year. The usual method of cradle washing is employed, the concentrates being finished off with quicksilver. The discovery of a new field leads to the usual gold rush, but after a year or two the cream of the mine is skimmed off and a few stragglers remain to clear up the leavings. None of the mines I have heard of have lasted for any length of time. At the present time the most flourishing is at a place 50 miles north-east of Dau, where several thousand Chinese are engaged. It appears to be in a rich mineral district, as other ores are to be found, including native silver.

Silver is found at the place just mentioned and also near Tachienlu. In this latter mine, where gold has also been found in alluvial gravel in a fissure of the limestone, some veins of silver-bearing galena are exposed. A Chinese company worked the mine for silver for a short time, but stopped after losing money in the enterprise.

Copper has been mined for a long time at Kungkaling, to the south of Litang and west of the river Yalung. It is from these mines that the coppersmiths of Dege obtain their metal. Copper ore has also been found in Dege at Wara Gompa on the river north of T'ungpu. A mine was opened in 1910 or thereabouts, but has since been closed.

Tin is apparently not found in Eastern Tibet, for no mention of it is ever made. The white alloy of tin used in Dege in metalwork is imported from China.

Iron ore mines may exist in South-east Tibet, but none has come to my knowledge. It is probable, however, that the swordsmiths of Dege obtain their iron locally. Most of the iron utensils used by the Tibetans come from Szechwan. At Ch'amdo they are said to come from Shobando, in Tibet west of the Salween.

There is no evidence of extensive coalfields, the only mine I have heard of being a small working on the Ba River 30 miles north of Batang, which is now closed. There are however some mines east of the Tung River near Lutingch'iao.

One useful mineral recently discovered which should be available for the foreign market is white mica, which has been found on the upper course of the Tung River 100 miles from Tachienlu near Romidrango. An enterprising Chinese was able to contract with a Hankow firm for the supply of mica sheets on marketable terms, but the war had put a stop to the works when I left Tachienlu in 1918.

The principal obstacles to modern mining enterprise in this country, apart from Chinese official obstruction, would be lack of labour and difficulty of transport. The former could no doubt be overcome by importing Chinese labour from Szechwan, but it would be quite impossible to feed them on local resources. All food would have to be brought from Szechwan. Machinery of moderate size might be brought by water as far as Chiating in Szechwan on the Yangtze, but beyond that it would have to be brought overland. The difficulties of the road to Tachienlu, which have been pointed out above, make this impossible. It is quite unlikely that any railway will be built even to Tachienlu—there is none yet in Szechwan itself—for the volume of traffic would never justify the enormous expenditure. Therefore any mining company that proposed to undertake large operations would have to build its own railway for purely mining purposes, such as the internal railways of Western Australia.

The map which is published at the end of this number of the *Journal* gives a detailed reduction of a route traverse I made with prismatic compass and sextant in 1916. The journey was described in the April number of the *Journal*. The original sheets, which are fourteen in number, are plotted on a scale of 2 miles to the inch, and record every town, village, and solitary house, and every monastery passed on the road. The average number of compass sights taken was at least two to the mile, often as much as three. The road from Gönchen to Ch'amdo had been travelled by Europeans before but not mapped; that from Ch'amdo to Batang is almost entirely new, while that from Batang to Gönchen had also never been mapped in detail. In the original sheets the shape of the country has been indicated by form lines as accurately as possible in a hurried compass traverse.

LIGHT RAILWAYS IN NEW COUNTRIES

Major W. Waters Van Ness, R.E.

I HAVE been tempted into giving the results of my experience and expressing my views on light railways through reading Colonel Napier's very interesting and instructive paper published in the January issue of the *Geographical Journal* on "The Road from Baghdad to Baku." I note that both Colonel Napier and Sir Valentine Chirol advocate motor transport in preference to railways for solving transport difficulties in Persia.

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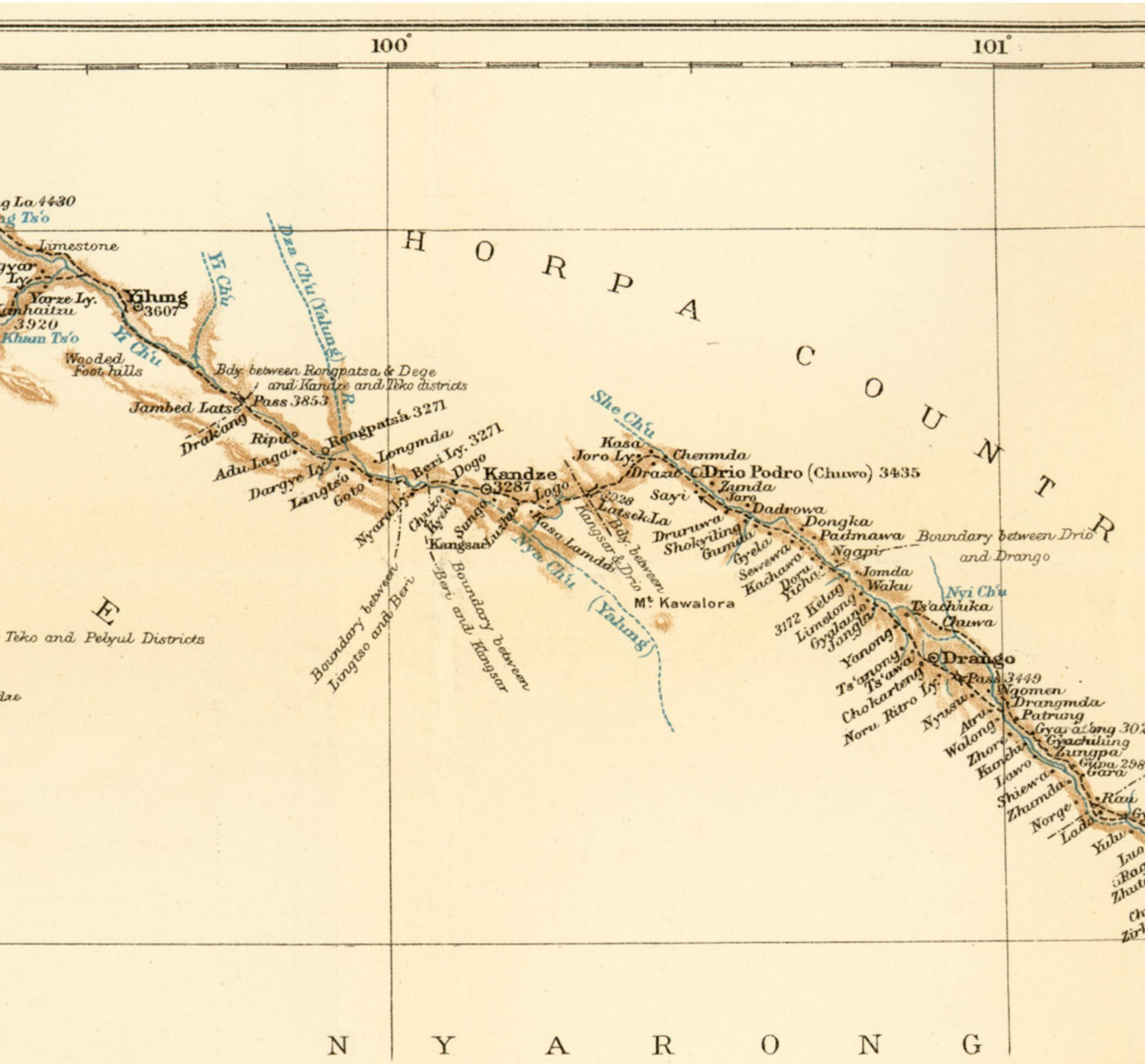
97°
98°
NOTE.
This map is reduced from Mr. Coales' prismatic compass traverse plotted by him on the scale of 1 inch to 2 miles, and adjusted to his astronomical latitudes, a list of which is given below. The longitudes have been adjusted to the positions of Tachienlu, Ch'amdo and Batang, on the Survey of India 1/1,000,000 map of India and adjacent countries. The latitudes are by meridian altitude of stars (in most cases N. and S. stars) taken with a 6-inch sextant and artificial horizon. The route from Tachienlu to Dau was not surveyed by Mr. Coales, but is taken from the map of J. Bacot published in his book "Le Tibet Révolté."
Heights are from aneroid, corrected by mercurial barometer at various points on the route.
LATITUDES
Tachienlu ... 30 3 11 N. North side of Taoyin's Yamen and west of Chief Lamasery.
Taofu ... 30 58 58 C.I.M. premises.
Kandze ... 31 38 3 150 yards south of main street.
Yilung ... 31 53 20 Side of Resthouse.
Gonch'en ... 31 49 2 Spur above Village.
Ch'amdo ... 31 9 11 E. gate of Lamasery.
Draya ... 30 34 43 South star only.
Batang ... 30 0 14 In front of northern dwelling in American Mission Compound.
Pelyul ... 31 13 29 One altitude of south star. Behind uppermost building of Lamasery.
32°
31
C H' A M D O
D R A Y A
Dza chu (Mekong)
Om Chu
Riwoche 3678
Chongeka
Daratong
Dzi Chu
Yarungka
Sumdo
Ratsa
Zhapa
Marawowa
Drashigong
Reyab
Ngemda (Enta) 3934
To Lhasa
Rishi
Kadong
Lagong 3642
Tsadrang
Nambs'o La 4634
Limestone Crags
Lamda 3315
Reong
Kocho
Satongwa
Rimda
Tongkating
Dromda
Nguro
Bege
CH'AMDO 3243
Yemda
Chowa
Tama La 4458
Reya
Mangp'u
Sogtri La 4256
Narawa
Dagong
Nyatawa
Bomde (Paotun)
Ngo Chu
Dong Chu
Dza Chu (Mekong)
Limestone Crags
Japed La 4690
Mt. Neri (sacred)
Igneous rocks
Topa R.H. 3792
Limestone
Lashi La 4416
Chorzhung 3884
Hot Spring
Cha'o Chu
Chor Chu
Dog Chu
Boundary between Ch'amdo and or Ch'angtu and Rungpu
Main road to Draya
Pudug La
Shingka 3945
Boundary between Ch'amdo and Draya & of Ch'angtu & Ch'aya districts
Bdy. between Ch'amdo & Riwoche, and between Ch'angtu and Enta
Pen La 4372
Patog
Yang La 4383
Chinewa
Wongkawa
Butawa
Jangragang 4079
Kasango
Lhagpawa
Yedo
Narrow valley cultivated
Ope
Sotong
Kamdawa
Pachu
Nemdo
Keparawa
Towa
Zhaniwo
Yengmdo (Yentaitang)
3122
Me Chu
Kegongwa
Dongp'u
Su Chu
Nyeparawa
Papa
Trip'uwa
Ripa
Ruins
Gyang Ling Ly.
Budongwa
Lhagongwa
Mdiwa
Rangdrub
Satawa
Dzodzo Ly.
Dembuwa
Gepa
Goyul
Draya (Chaya) 3673
Nyowa
Jilewa
Lab Chu
Obom Chu
Boundary between Gonjo and Chaya
R. MEKONG
90°
95°
100°
Zilling Tso
T I B E T
Tengri Nor
Giamo nu Chu (Salween)
LHASA
Brahmaputra or Tsangpo
Dzogchen
Gonchen
Kandze
Riwoche
Pelyul
Drango
Chamdo
Dau
Draya
Bamed
Tachienlu
Batang
Hokow
SZECHWAN
Sadiya
Talap
BHUTAN
NEPAL
SIKKIM
Darjeeling
R. Brahmaputra
A S S A M
R. Yalung
Yangtze
R. Mekong
R. Salween
Talifu
Myitkyina
YUNNANFU
BENGAL
Bhamo
YUNNAN
Red R.
R. Ganges
Tropic of Cancer
Lashio
CALCUTTA
Alon
Myingyan
MANDALAY
B U R M A
FRENCH
30
25


98°
99°
Le La 4412
Hot Spring
Muring Ch'u
Dzogch'en 3939
Lake
Zi Ch'u
Lha Lungko (ruin)
Open valley
Galiti
Gabing Ly.
Narrow ravine
Buge
Noda Ly. (ruins)
Muring La 4430
Muring Ts'o
Peak & Glacier
Kolondo 3553
Kolondo Ly.
Tro La 4630
Limestone
Shankontzu 3743
Open Valley
Hlagyar Ly.
Yorze Ly.
Yihung 3607
Kamhaitzu 3920
Mdama
Mamda
Nangnda
Barenmda
Peak and Glacier
Granite
Kham Ts'o
Ya Ch'u
Wooded Foot hills
Jambed L
Gönchen
Kashenda
3264
Muhomda
Nyermda
D
E
DRE CH'U
YANGTZE
DO CH'U
Changra
Changra Ly.
Wara Ly.
Sugar Loaf Pk
Gi 3639
Nge La
4400
Limestone
Sexongdo, Chorten
Kangt'og or Dzamt'og 3033
G
3282 Timgp'u
Ngotoke
Dasho
Zamro
Lhege
Dzi Ch'u
Thickly Wooded
Zhachagyo
3660 Ngenang
Gyungk'ong
Dangt'og Ly.
Drache
Deep valley
Desho Podro
Cultivation
Gomda
Njamda
Botog
Mimda
Rabdo
Demda
Nyoe
Sot'ong 2995
Zhinja
Joda
Lingsho
E
Bdy. between Teko and Pelyul Districts
Lashi La 4416
Chorzhung 3884
Hot Spring
Kara La 4364
Dzi Ch'u
Kargang 3611
Chor Ch'u
Re Ch'u
Ke te La 4261
Ado
Trets'ong Ly.
Zung Shi Ch'u
Limestone
Dog Ch'u
Re Ch'u
Doka 3902
Road to Gonjo
Boundary between Ch'amdo & Lhato and of Ch'angtu and Tungp'u
DO CH'U
Momda
Demdo 4106
Col
Main Road to Kandze
Dangdra 3460
Gendi
very deep valley
3012
Pelyul 3111
Gyedong
Desa
Nera
Cultivation on Alluvial cones
Dzongsho
Ngu Ch'u
Ronged 3110
Sherla
Scattered houses
Ts'ech'u shi
She Ch'u
Thickly wooded range
Me La 4298
Obtang
SANAI
Thickly wooded ravine
A Y A
Boundary between Draya and Gonjo and Chaya & Kung Districts
Ma Ch'u
Gazhi Podro
Komdo 2973
Chorten
Pungngo
Dene
GONJO
Dagyed
Road to Sanai
Limestone
Lab Ch'u
Obom Ch'u
Lhonzi La 4514
Gonjo Dzong
Gonjo 3607
Rangu
Kongsa
4443
4255
Ma Ch'u
Sandstone
Rabjor 3729
Shingmar
Draya (Chaya)
3673
Lhagongwa
Budongwa
Mdiwa
Bika Ly.
Gepa
Goyul
Nyowa
Jilewa
Dongkowa
Gatsawa
Chorten
Bunglowa
Road to Sanai
Open grass Country
Sandstone
Sandstone
Gorge
Hot spring
Bdy. between Ba and Dege and Pa'an and Pelyul.
Sama 3286
Wooded
Ngugpa La 4170
Thickly wooded ravine
Me Ch'u
Dembawa
Main road to Gurumdo and Batang
Do La 4443
Bdy. between Gonjo & Markham & of Kung and Ning Ch'ang districts
Plain
DRE CH'U (YANGTZE)
Shi Ch'u
Do La
Lhato 4122
R. MEKONG
Limestone
M
K H A
Wooded ravines
Gorge
Taragamda 3812
Sidi Ly.
Oze
Kema
Tazong
Drangowa
Rasa
Tsanagyi
Chushiugang
R
Shoda
Roda
Ba Ch'u
Bamgshi
Lhamdo
Mimda
Dranga
Keserowa 3036
Laka
Sodongwa
Andre
Ba Ch'u
Ngode
Lamagge
Buttiwa
Napa
G
N
A
T



EASTERN TIBET

ROUTE FROM
TACHIENLU TO CH'AMDO AND RIWOCH'E

Traversed by

OLIVER COALES.

1916-17.

Scale 1/1,000,000 or 1/ M.

10 5 0 10 20 30 40 50 60

Miles

10 0 10 20 30 40 50 60 70 80 90 100


101°
3515 approx.
Dza Ch'u
Szechwan Br.
Om Ch'u
To Gönchen
F
G
E
A
C
B
H
Rising to 600m. and over
PLAN OF CH'AMDO
Yunnan Br.
3240
Cliff
3465 approx.
A General's Residence
B Magistrates ,,
C City Temple
D God of War Temple
E Great Temple
F Barrier Wall
G Parade ground
H Main Street
DZA CH'U (MEKONG)
To Draya
Scale 1/50,000
0
1 Mile
N
T
R
Y
Boundary between Drio and Drango
Nyi Ch'u
Chuwa
Drango
Pass 3449
Ngomen
Drangmda
Patrung
Walong
Zhoro
Gyachiliing
Zungpa
Gara
Boundary between Dau and Luho
Shiewa
Zhumda
Norge
Rau
Grase Ch'uka
Yulu
Trangri or Goto
Luo
Zhutang
Tsime
Drato
Chuzha
Zirkyizha
Lara
Zuno
Nyokoto
Kelo
Lowa
Sargor
Dau (Tao Fu) 2814
C
31°
H
Koa
G
A
Shao
Gota Ly. (Taining)
Pamei (Bamed) 3397
L
IWO CH'E
Pass
Haitzu Shan (Mt. Zharari)
A
Trampadrong 3532 (Ch'angpachun)
Tung Ho.
50
60
90
100

Taofu ... 30 58 58 C.I.M. premises.
Kandze ... 31 38 3 150 yards south of main street.
Yilung ... 31 53 20 Side of Resthouse.
Gonch'en ... 31 49 2 Spur above Village.
Ch'amdo ... 31 9 11 E. gate of Lamasery.
Draya ... 30 34 43 South star only.
Batang ... 30 0 14 In front of northern dwelling in American Mission Compound.
Pelyul ... 31 13 29 One altitude of south star. Behind uppermost building of Lamasery.
C H' A M D O
D R A Y A
Dza chu (Mekong)
Riwoche 3678
Chongeka
Daratong
Yarungka
Sumdo
Zhapa
Ratsa
Pats'eka
Drashigong
Marawowa
Reyab
Ngemda (Enta) 3934
To Lhasa
Lamda 3315
Reong
Kocho
Satongwa
Rimda
Tongkating
Dromdo
Nguro
Bege
Ngomda
CHAMDO 3243
Yemda
Tama La 4458
Reya 3584
Japed La 4690
Topa R.H. 3792
Mt. Neri (sacred)
Igneous rocks
Limestone Crags
Lashi La 4416
Chorzhung 3884
Hot Spring
Nyalawa
Bomde (Paotun)
Main road to Draya
Pudug La
Shingka 3945
Boundary between Ch'amdo and Draya & of Changtu & Chaya districts
Pen La 4372
Yang La 4383
Chinewa
Wongk'awa
Kasango
Jangragang 4079
Lhagpawa
Narrow valley cultivated
Sotong
Nemdo
Yengmdo (Yentaitang)
Kegongwa
Dongp'u
Draya (Chaya) 3673
Lagong 3642
Namts'o La 4634
Sogtri La 4256
Narawa
Dagong
Bdy. between Ch'amdo & Riwoche and between Chang tu and Enta
Boundary between Ch'amdo and of Ch'angtu and Rungpu
R. MEKONG
31
98°
TIBET
LHASA
Brahmaputra or Tsangpo
SZECHWAN
Chamdo
Draya
Batang
Tachienlu
Riwoche
Dzogchen
Kandze
Drango
Dau
Bamed
Hokow
BHUTAN
NEPAL
SIKKIM
Darjeeling
Sadiya
Talap
ASSAM
BENGAL
CALCUTTA
Tropic of Cancer
Myitkyina
Bhamo
Talifu
YUNNANFU
YÜNNAN
Lashio
MANDALAY
BURMA
FRENCH INDO CHINA
BAY OF BENGAL
Prome
RANGOON
Bassein
SIAM
Scale 1/20,000,000
Railways

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EASTERN TIBET

ROUTE FROM
TACHIENLU TO CH'AMDO AND RIWOCH'E

Traversed by

OLIVER COALES.

1916-17.

Scale 1/1,000,000 or 1/ M.

10 5 0 10 20 30 40 50 60
Miles

10 0 10 20 30 40 50 60 70 80 90 100
Kilometres

Mr Coales' Route ----------

Ly. = Lamasery

Heights in metres above mean sea level.

Br. = Bridge.

100° 101°

EASTERN TIBET
Coales.