

**Royal  
Geographical  
Society**  
with IBG

Advancing geography  
and geographical learning

---

Russian Explorations in Manchuria

Author(s): P. Kropotkin

Source: *The Geographical Journal*, Vol. 11, No. 1 (Jan., 1898), pp. 63-65

Published by: [The Royal Geographical Society \(with the Institute of British Geographers\)](#)

Stable URL: <http://www.jstor.org/stable/1774855>

Accessed: 14/09/2014 15:36

---

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at  
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



*The Royal Geographical Society (with the Institute of British Geographers)* is collaborating with JSTOR to digitize, preserve and extend access to *The Geographical Journal*.

<http://www.jstor.org>

F. REGIONS OF INLAND DRAINAGE.		F. REGIONS OF INLAND DRAINAGE— <i>continued.</i>	
<i>A. Central Asia.</i>			Sq. miles.
1. Tibet ... ..	239,500	18. Trans-Caspian region south of 55° N. ... ..	187,500
2. Tsaidam and Kuku-nor ...	116,000	19. Sea of Aral ... ..	26,000
3. Tarim basin to Suchou ...	467,000	20. Caspian Sea ... ..	169,500
4. Middle Gobi (Alashan) ...	201,000		1,759,000
5. Northern and Eastern Gobi	411,000		
6. Dzungaria ... ..	125,500		
	1,560,000		
<i>B. Aralo-Caspian Region.</i>		<i>C. Iranian Region.</i>	
7. Lake Balkhash ... ..	187,500	21. Inner Iran ... ..	602,500
8. Syr-Daria ... ..	108,000	22. Lake Urmia ... ..	21,000
9. Syr-Daria to Amu-Daria ...	102,500	23. Lake Van ... ..	7,500
10. Amu-Daria ... ..	173,500		631,000
11. Murghab to Heri-Rud ...	89,000	<i>D. Syrian-Arabian Region.</i>	
12. Atrek and South Caspian shore to the Kura ... ..	64,000	24. Syrian-Arabian desert ...	899,500
13. Kura with the Aras ... ..	75,500	25. Dead Sea ... ..	19,500
14. Terek and Kuma ... ..	61,500		919,000
15. Ural ... ..	105,000	<i>E. Asia Minor.</i>	
16. Emba (Ural to Mugojar mountains) ... ..	85,000	26. Inner region with Lake Eyerdir ... ..	31,000
17. Mugojar mountains to Lake Balkhash ... ..	324,500		
		Total (F) ... ..	4,900,000

## RUSSIAN EXPLORATIONS IN MANCHURIA.\*

THESE explorations were made in 1896, in connection with the Trans-Siberian railway, by the mining engineers, E. E. Anert and I. I. Revyakin, the railway engineer, P. S. Sviaghin, and V. L. Komaroff, botanist. Broadly speaking, the journey was made from the Suifun river (near Vladivostok) to Ninguta, during which a series of parallel ranges were crossed along two different routes by two members of the expedition. From Ninguta they went to the small town Omoso, or Homoso, whence part of the expedition returned to the Usuri, taking a more northern route; while M. Anert went to Kirin, the capital of Manchuria, and thence proceeded in a boat down the Sungari till its junction with the Amur, and returned to Khabarovsk.

The Sungari, up to Kirin, was already explored in 1864, when Colonel Chernyaeff and the Urga consul, M. Shishmareff, accompanied by Th. Usoltseff, astronomer, two experienced topographers—M. Vasilieff and his aid—and myself, went on board the small steamer *Usuri* up the then quite unknown great river of Manchuria. Our steamer, though she only had 3 feet draught, had great difficulty in making her way across the countless banks of the lower course of the Sungari; but finally we reached Kirin, and a map of the river was made on a scale of two-thirds of a mile to the inch. The map was so good that with its aid we easily navigated down the river on our back journey, only once running over a bank in the upper course, from which we soon cleared with the aid of some two hundred Chinamen—the Chinese authorities being only too anxious not to have

\* Abridged from a paper by E. E. Anert, in the *Izvestia* of the Russian Geographical Society, 1897, ii., and the *Yearly Report* for 1896.

our steamer wintering on the Sungari. Unhappily, the original maps, as well as the accounts which Usoltseff and myself wrote of this journey and published in the *Memoirs of the Siberian branch of the Geographical Society*, were destroyed during the great conflagration at Irkutsk.\* As to the researches of the Russian engineers in South-East Manchuria, they are entirely new, and so complete as to give a full idea of this formerly unexplored region.

Leaving the Suifun river at Poltavskaya, the expedition crossed the Hai-hing-lin mountains, which run south-west to north-east and are pierced by the Siao-Suifun twice. M. Anert went through the passes Hai-pin-lin, Kun-yu-shiu, Khu-li-mi-lin, and Cho-li-tai; while Revyakin, with the party of topographers of Colonel Kozlovsky, crossed the same ridge further south. Both reached the Muren river, called by the Chinese Molin-ho. The range, which is accompanied by several parallel subranges, consists of granite covered with gneisses and mica-schists, pierced by veins of porphyries and other younger rocks. Already in the Kun-yu-shiu Anert saw the flat elevated plains covered with basalts, and could notice a number of small conic-shaped hills consisting of porphyritic diabases.

Crossing another range, which has the same direction and the same composition, M. Anert reached the Mudan-tsan river and the town of Ninguta, where he stayed for a week. From Ninguta the expedition went to the small trading town of Omoso, or Homoso. They crossed again a range which runs towards the north  $40^{\circ}$  E., and consists of sandstones and quartzites, which are covered in places with lava-streams. The lake Belten, towards which an excursion was made, is due to such a lava-stream acting as a dam across which a river runs, making a waterfall 105 feet high. The last range, which was crossed before reaching Omoso, consists of granite and gneisses, intersected with dykes of diabase, diorite, and so on. The flat-topped, table-like mountains which are characteristic of the neighbourhoods of Ninguta, do not appear further west.

From Omoso Anert went to Kirin. He crossed, first, the Tiang-guan-tsai-lin mountains, which consist of several parallel ridges running south-west to north-east (N.  $25-30^{\circ}$  E.), and visited the coal-mines of Tio-ho, or Chau-ho, where a layer of coal about 8 feet thick is worked; the whole surface of the coal-bearing formation, limited by granite hills, being probably small. He then crossed the Loe-lin mountains, which attain a great height, and are composed of a series of five or six parallel ranges, the height of which increases southwards. This system is also composed of granites and various crystalline slates. The Sungari was reached at Kirin, where it has a width of about 400 yards, and flows amidst clayey river-terraces, raised about 35 feet above the average level of the river. The Siao Pei-shan mountains rise in the south-west of Kirin; granites, quartzites, porphyrites, and marble veins enter into their composition. On August 20, Anert left Kirin in a boat to go down the Sungari. At a distance of about 60 miles from the Manchurian capital, the river issues from the mountains and enters a wide plain, where only a few low cliffs approach the river; they consist of Oolite sandstones and clays, while immense sand-dunes cover most of the plain. Many sand-bars are formed in the bed of the river. An immense desert,

---

\* The excellent map of M. Vasilieff was lithographed on six sheets in a few copies only at Irkutsk. These copies were destroyed during the fire. A small reduction of it was published in the said *Memoirs*, but this reduction was based upon five astronomical determinations of Usoltseff, the accuracy of which was not very great. Even this edition was destroyed by the fire, and the very few copies left are now a great bibliographical rarity.

covered with sand-dunes and very poorly clothed with vegetation, then begins; only occasionally the same red clays or conglomerates appearing in low cliffs. Then the Sungari pierces the granitic Hei-shan ridge (a continuation of the Little Khingan), and enters below Sian-sin the wet lowlands of its lower course.

In his general conclusions, after having mentioned the structure of the mountains between the Suifun and the Muren, and of the flat-topped mountains in the basin of the Mudan-tsan near Ninguta (conglomerates and sandstones, covered with a layer of volcanic tuff and basalt, with occasional layers of more recent lava-streams), Mr. Anert says, "We must thus conclude that the Little Khingan and the mountains of Middle Manchuria represent one whole, and are a mountain region consisting of a whole series of parallel ranges running from the south-south-west to north-north-east. None of them is a continuous chain, the central line of the system being thus shifted east and west. Between the Tiang-guan-tsai-lin and the Loe-lin, to the south of the Ta and the Siao Laba-lins, as well as in many other spots of the basin of the upper Sungari, there are remains of the coal-bearing Mesozoic deposits, with beds of coal and breccias, which are retained in the shape of islands amidst the granites and the older crystalline rocks.

"When the traveller enters the plain of the Middle Sungari, he is struck with the difference of landscape. Instead of the variety of mountains and valleys, one sees a monotonous flat surface, into which the rivers have cut deep (100 to 200 feet) and sometimes broad valleys. Oolitic sandstones and clay slates, lying quite horizontally, and covered with red and yellow clays, also arranged in horizontal beds, are occasionally seen in some low cliffs. In the middle parts of that plain begin the sands which spread as far as Tsitsikar, according to the report of Prince Andronikoff. Dunes appear at the same time in the river-valley, and the surface of the sands is covered with *barkans*. These plains, which do not depend upon the work of the Sungari, deserve the name of the Mongol-Manchurian Great Plain."

The region of the lower Sungari has a quite different character; it belongs to the lowlands of the Amur and Sungari. At high water all these lowlands are inundated with water, and then represent quite an interior sea; there are no old shores, no terraces—the two rivers and their tributaries flowing between low banks, and dividing into a great number of separate branches.

The vegetation of the Sungari region is the same as in the Little Khingan; and the influence of the monsoons, which bring with them immense quantities of rain, is felt in the valley of the Sungari as it is felt in the valleys of the Amur and the Usuri.

P. KROPOTKIN.

## THE MONTHLY RECORD.

### THE SOCIETY.

**Royal Geographical Society's Year-Book.**—The Council have decided to publish a "Year-Book and Record," on somewhat similar lines to those issued by the Royal Society, only the two will be combined in one volume. As a matter of fact, the List of Fellows annually issued contains a good deal of information in addition to the list—such as List of Referees, of recipients of Royal Medals and other honours, of institutions, etc., to which the publications of the Society are presented or with which exchanges are effected. In addition to these lists, the new Year-Book will contain the charter and bye-laws, a brief sketch of the

No. I.—JANUARY, 1898.]

F