

Attractive Natural Geological and Cultural-Historical Sites of the Baikal region (East Siberia)

Preliminary program for field itinerary

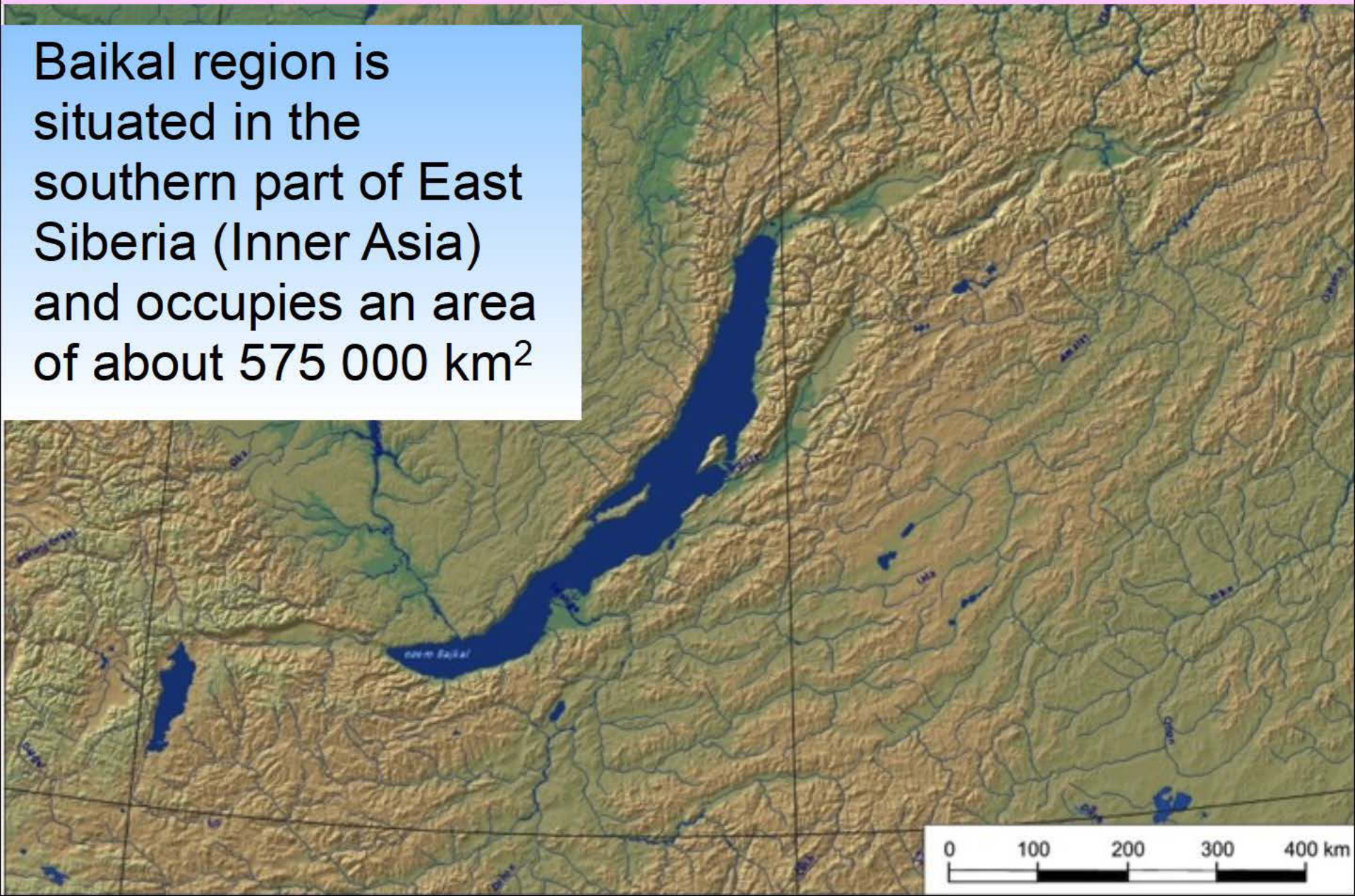
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Siberia – Baikal – 2013
(24 July – 5 August)

Introduction

Baikal region is situated in the southern part of East Siberia (Inner Asia) and occupies an area of about 575 000 km²

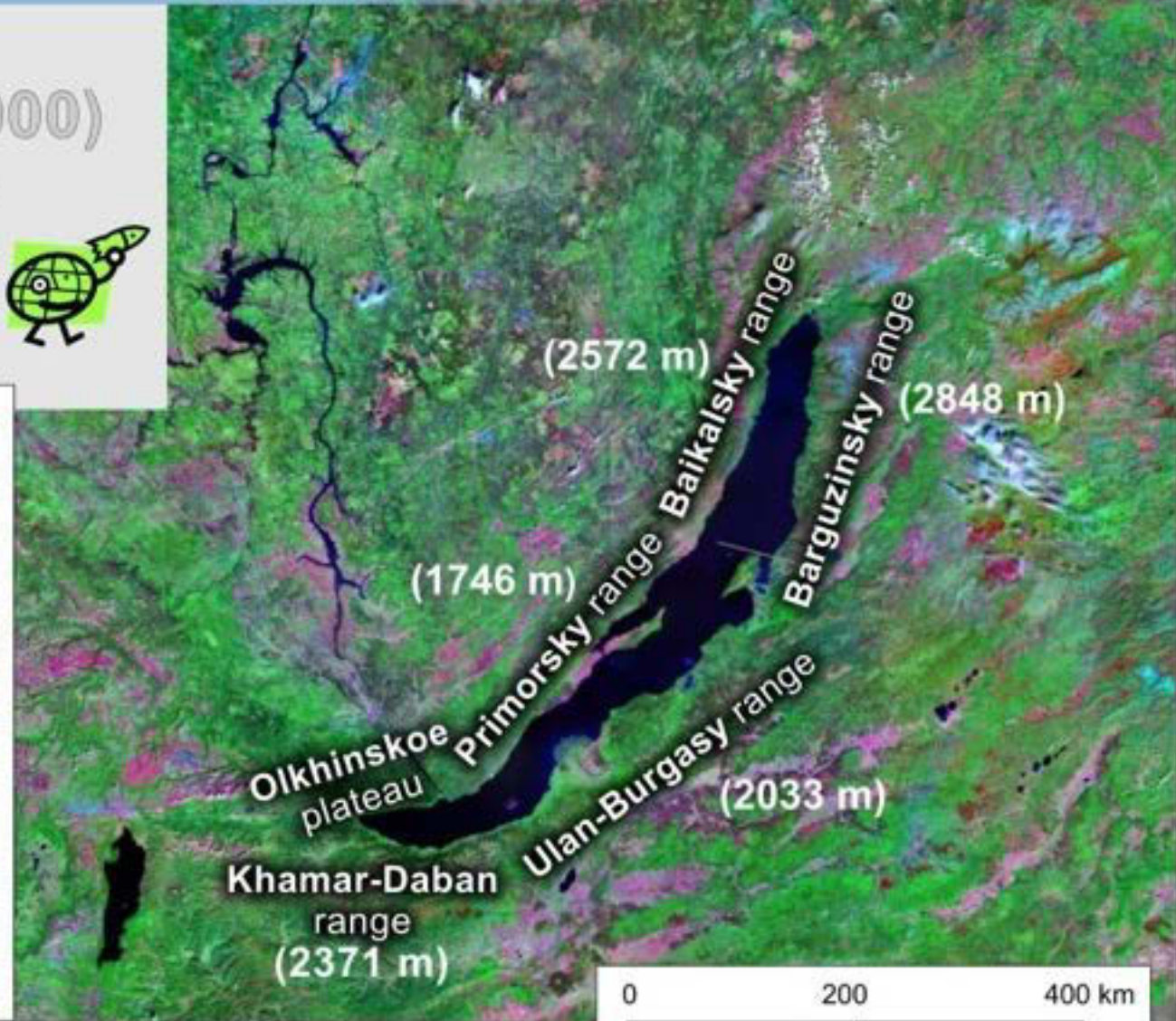


The Lake **Baikal** is the central element of this natural system

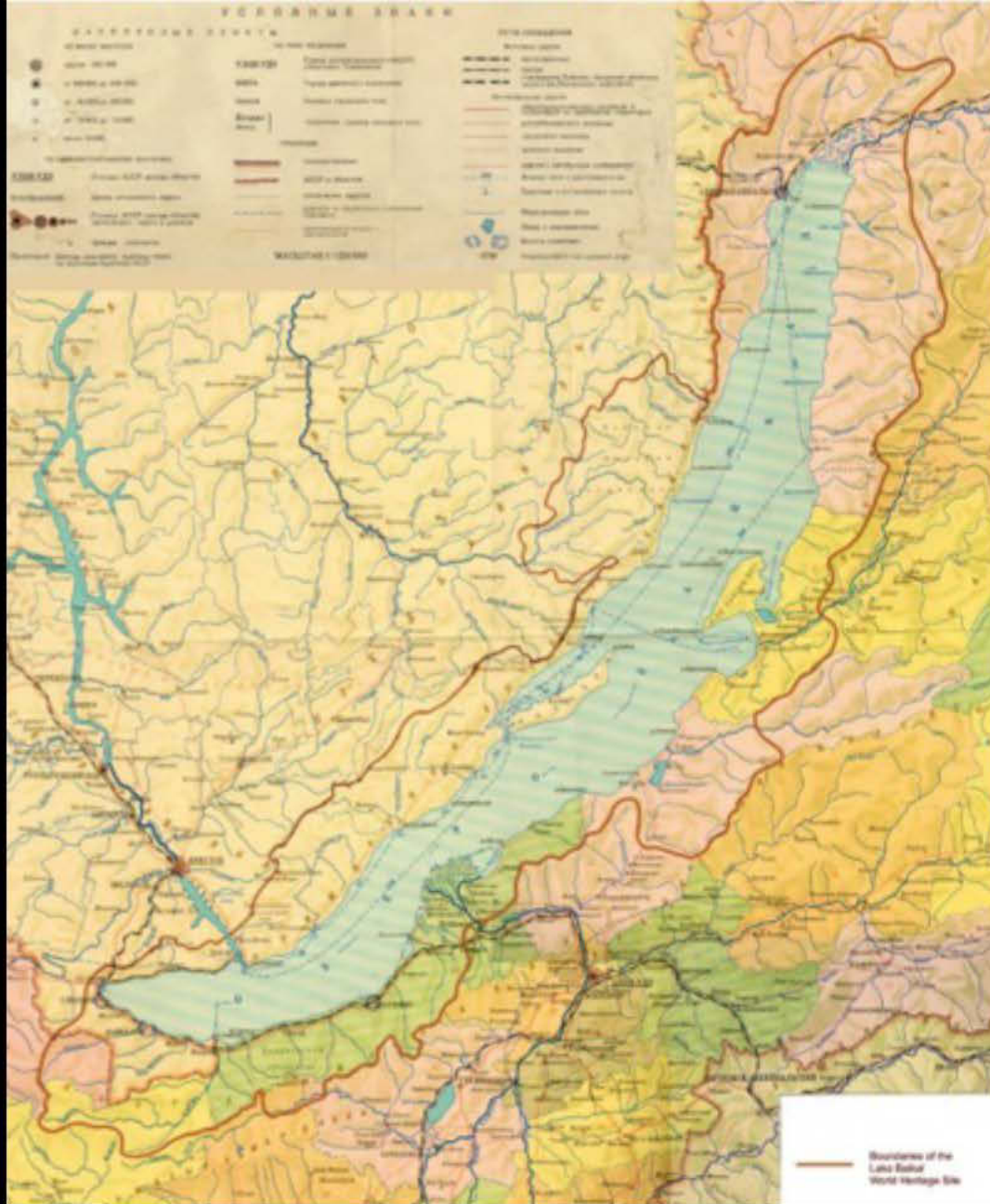
Landsat-7 (2000)
TM image



- The length of Lake Baikal is **635 km**
- Maximal width of Lake is 80 km
- The volume of fresh water is **23 015 km³**
- Max depth is **1642 m**
- The total thickness of sediments in the Baikal basin is **8-9 km**



Boundaries of the Lake Baikal World Heritage Site



The Baikal Lake basin and its coastal zone are included in the World Heritage List in 1996 yr.

Natural World Heritage criteria:

(vii), (viii), (ix), (x)*

*details see next slides



Note from site UNESCO:


“...The Committee inscribed Lake Baikal as the most outstanding example of a freshwater ecosystem on the basis of natural criteria (vii), (viii), (ix) and (x). It is the oldest and deepest of the world's lakes containing nearly 20% of the world's unfrozen freshwater reserve. The lake contains an outstanding variety of endemic flora and fauna, which is of exceptional value to evolutionary science. It is also surrounded by a system of protected areas that have high scenic and other natural values ...”.

<http://whc.unesco.org/en/criteria/>









Within this large geosite (Lake Baikal system) there are many smaller in scale, but very valuable geosites of Geomorphologic, Tectonic, Palaeogeographic, Landscape, Mineralogical, Petrographic, Hydrogeologic, Geocryologic, Geobotanic and Biologic, Geoarcheologic and other types.

That allows considering such sites as attractive ones for scientific investigations and scientific geotourism.

LOCATION MAP OF STUDIED GEOSITES ON TERRITORY OF "LAKE BAIKAL" WORLD HERITAGE SITE

 - TERRITORY OF THE "LAKE BAIKAL" WORLD HERITAGE SITE
(<http://whc.unesco.org/sites/754-map.pdf>)

TYPES OF GEOSITES *

 - stratigraphic	 - paleontological
 - mineralogical	 - ore-petrographical
 - hydrogeologic	 - complex
 - geomorphologic	 - tectonic: palaeotectonic, neotectonic, structural-geological

AREAS WITHIN WHICH ARE LOCATED NUMEROUS AND VARIOUS GEOSITES *

- (I) - Slyudyanka region (> 30 geosites)
- (II) - "Source of Angara River" region (> 10 geosites)
- (III) - Olkhon region (> 45 geosites)
- (IV) - "Svyatoy Nos Peninsula and Ushkan'y Islands" region (> 10 geosites)

* - Types of geosites after (Lapo et al., 1993, 1997) with changes. In the tectonic type was included: palaeotectonic, neotectonic and structural-geological types of geosites. Was added "complex" type, which alongside with geological characteristics of geosite is interesting with standpoint other scientific disciplines.

* - Within this areas (borders are shown by black line) the varicolored triangles shows only type of geosites corresponding to for them.



Skovitina T., Sizov A.
IEC SB RAS, Irkutsk (2005)

LOCATION MAP OF RESERVES AND NATIONAL PARKS ADJOINING THE LAKE BAIKAL

RESERVES:

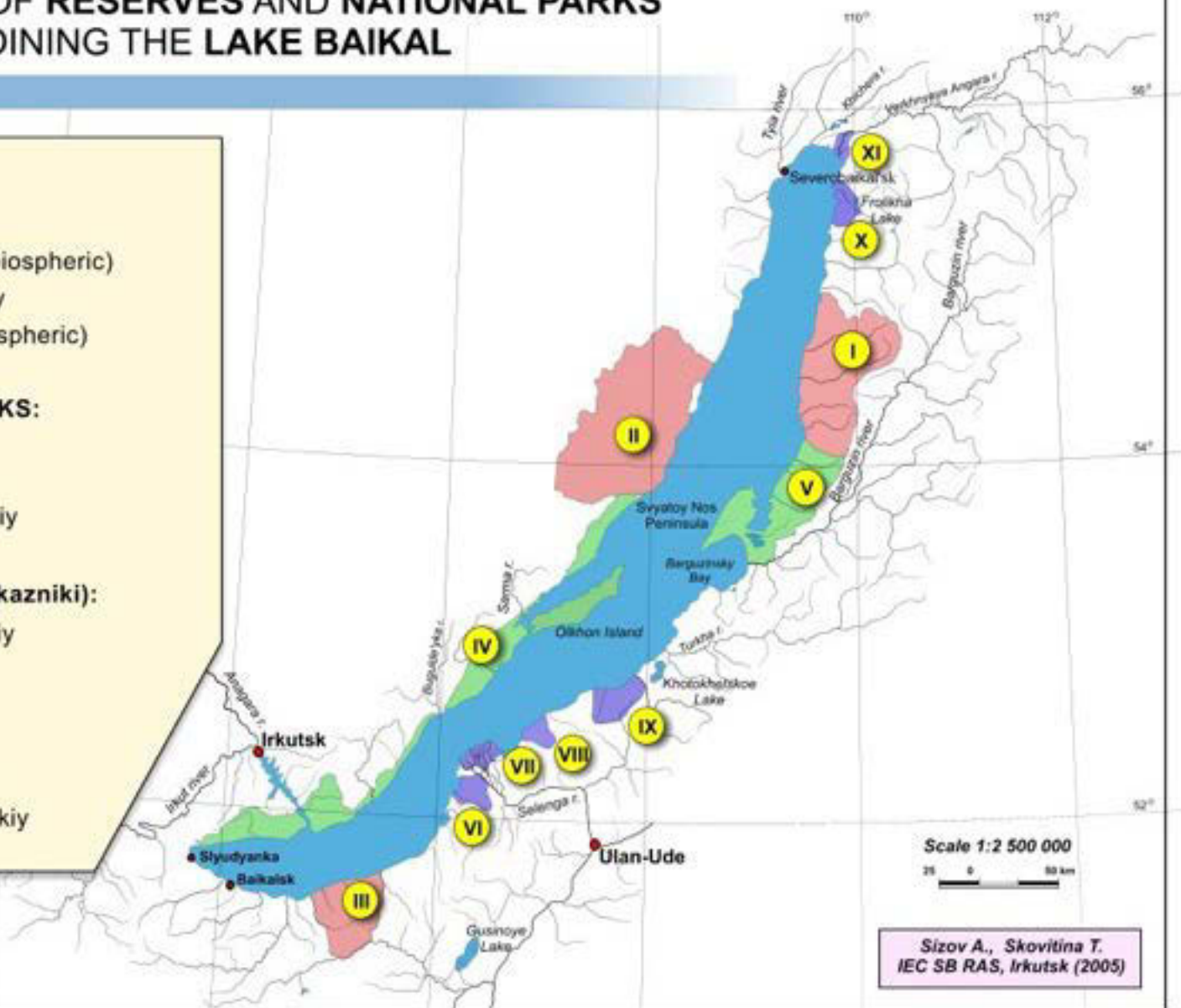
- I** - Barguzinskiy (biospheric)
- II** - Baikalo-Lenskiy
- III** - Baikal'skiy (biospheric)

NATIONAL PARKS:

- IV** - Pribaikalskiy
- V** - Trans-Baikal'skiy

PRESERVES (zakazniki):

- VI** - Stepnodvorezkiy
- VII** - Kabanskiy
- VIII** - Anhalukhskiy
- IX** - Pribaikalskiy
- X** - Frolikhinskiy
- XI** - Verkhneangarskiy



Besides, unique natural (including geological, geomorphological etc.) objects, Baikal region (Southern part of East Siberia) is famous for the

rich multinational historical and cultural traditions which have developed for some centuries from the beginning of development of the Eastern Siberia territory.



In Eastern Siberia for a winning new territories (XVII c.) it wasn't always necessary to resort to armed conflicts as lands was enough. Advance of the Russian colonists didn't remove aboriginals (Ostyakov, Buryats, Yakuts, Evenks, etc.) from their inhabited area. Therefore settlements, and together with them the cultural landscape of Eastern Siberia was and remains mixed.

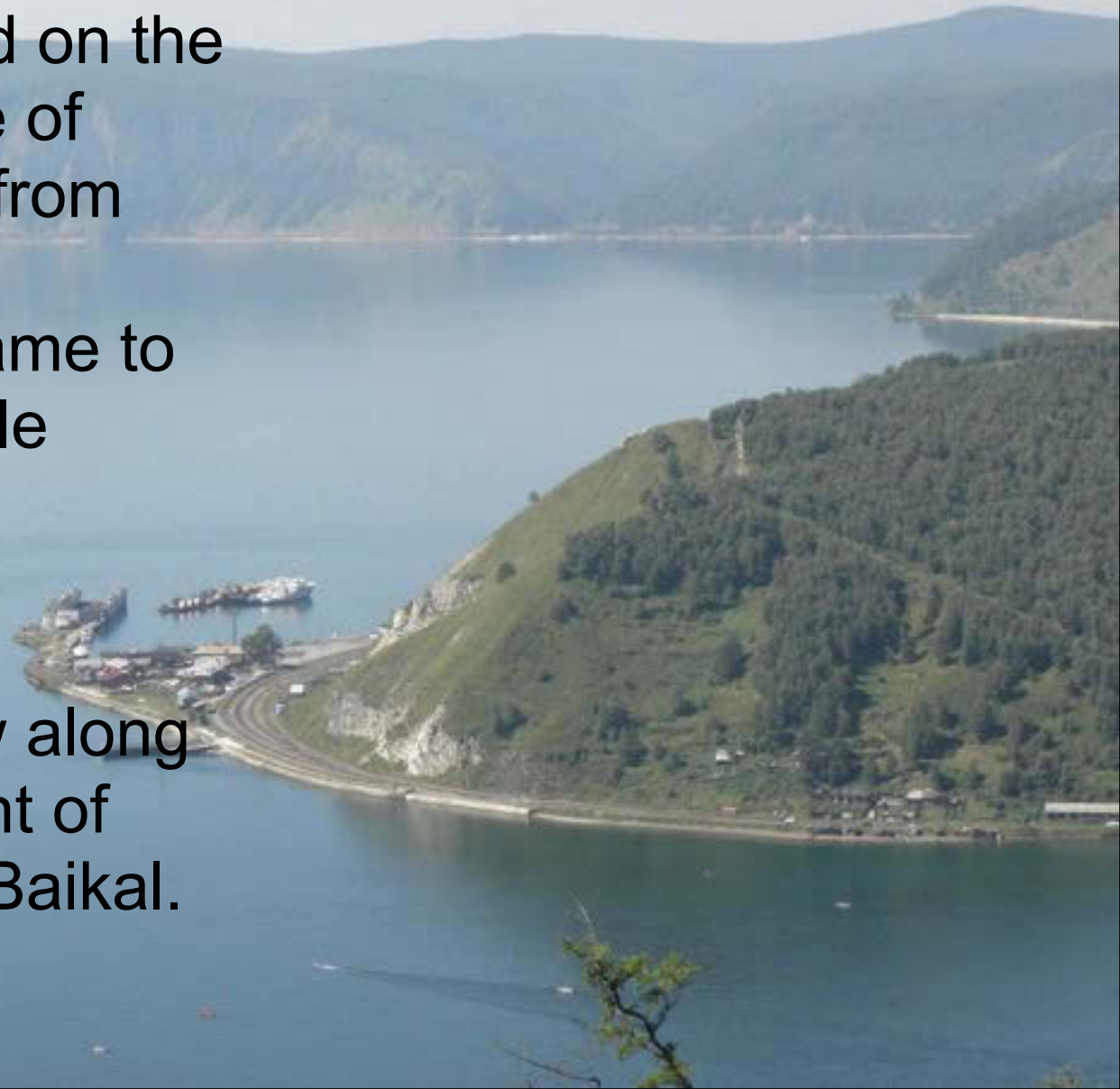
During the visit of the architectural and ethnographic museum "Taltsy" we will be able to be convinced of it.

Main places for visiting:

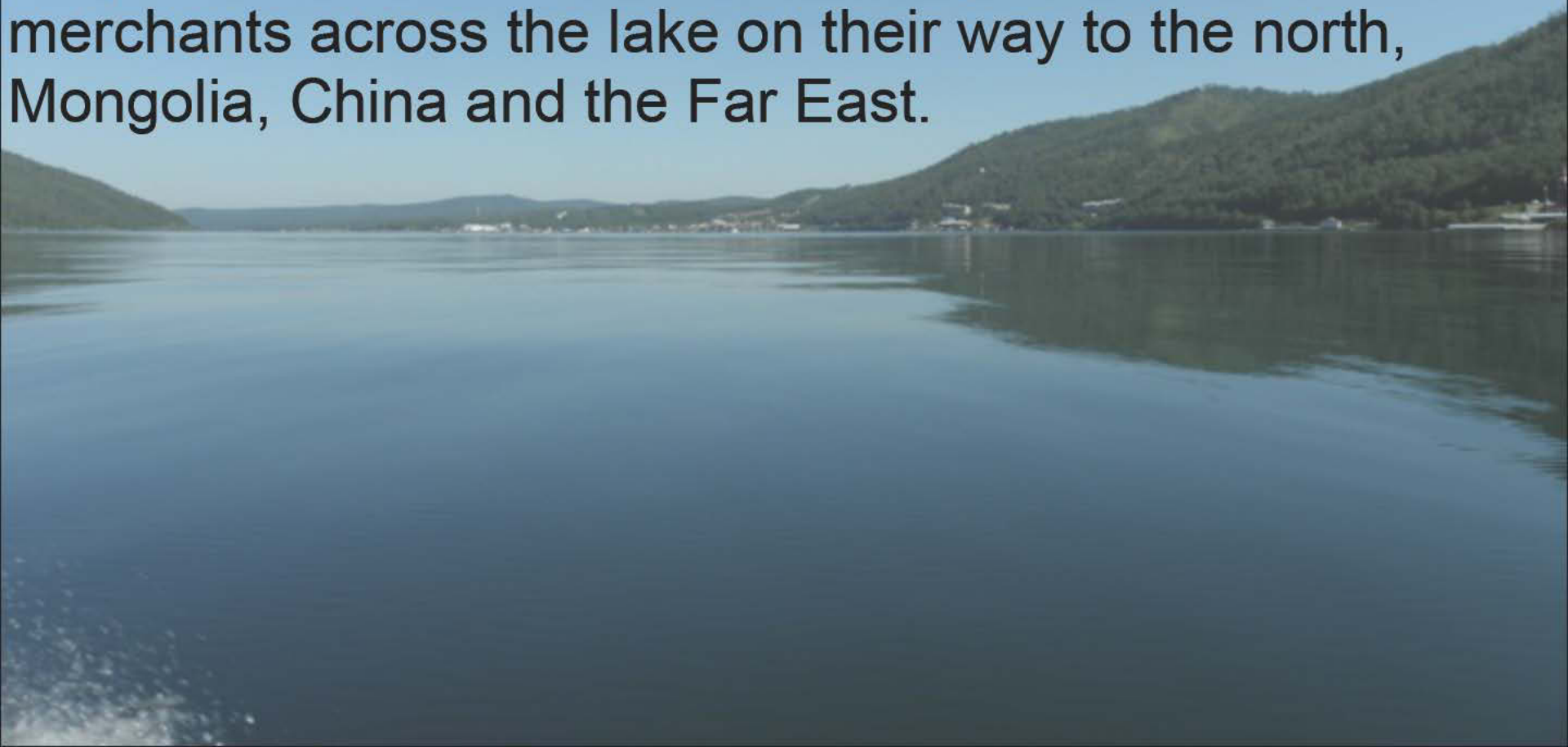
- ❖ Irkutsk city (see next presentation)
- ❖ Listvyanka village (Southern Baikal)
- ❖ Architectural-ethnographic museum “Taltsy”
- ❖ Olkhon Island (Middle Baikal)
- ❖ Arshan village (Tunka Valley, S-W Pribaikalie)

Listvyanka village

The small village Listvyanka is located on the south-western shore of Lake Baikal (70 km from Irkutsk). Russian pioneers came to this spot in the middle of the 17th century, founded trading and military post there. The settlement grew along with the development of navigation on Lake Baikal.



Many vessels were built at the Listvyanka shipyard, the British icebreakers "Baikal" and "Angara" were assembled also there. This old-style Siberian village, known as the gates to Baikal, is situated at the source of the Angara River, the only outflow of the deepest lake. From the 18th century a ferry took merchants across the lake on their way to the north, Mongolia, China and the Far East.





The population of the Listvyanka is about 2,300 people, mostly employed in human services. Despite its modest size Listvyanka is one of the busiest tourist centers in Siberia. Due to its proximity to Irkutsk, it sees probably more visitors than all other towns and villages on Lake Baikal combined - particularly on the weekends when crowds of Russian and Western tourists visit the settlement. <http://listvyanka.info/>



Listvyanka has a developed tourist infrastructure: a museum, chairlift to the city viewpoint, information center, boat jetty, art gallery, tourist-oriented market, picnic areas, several hotels and a plethora of restaurants and cafes. <http://listvyanka.info/>

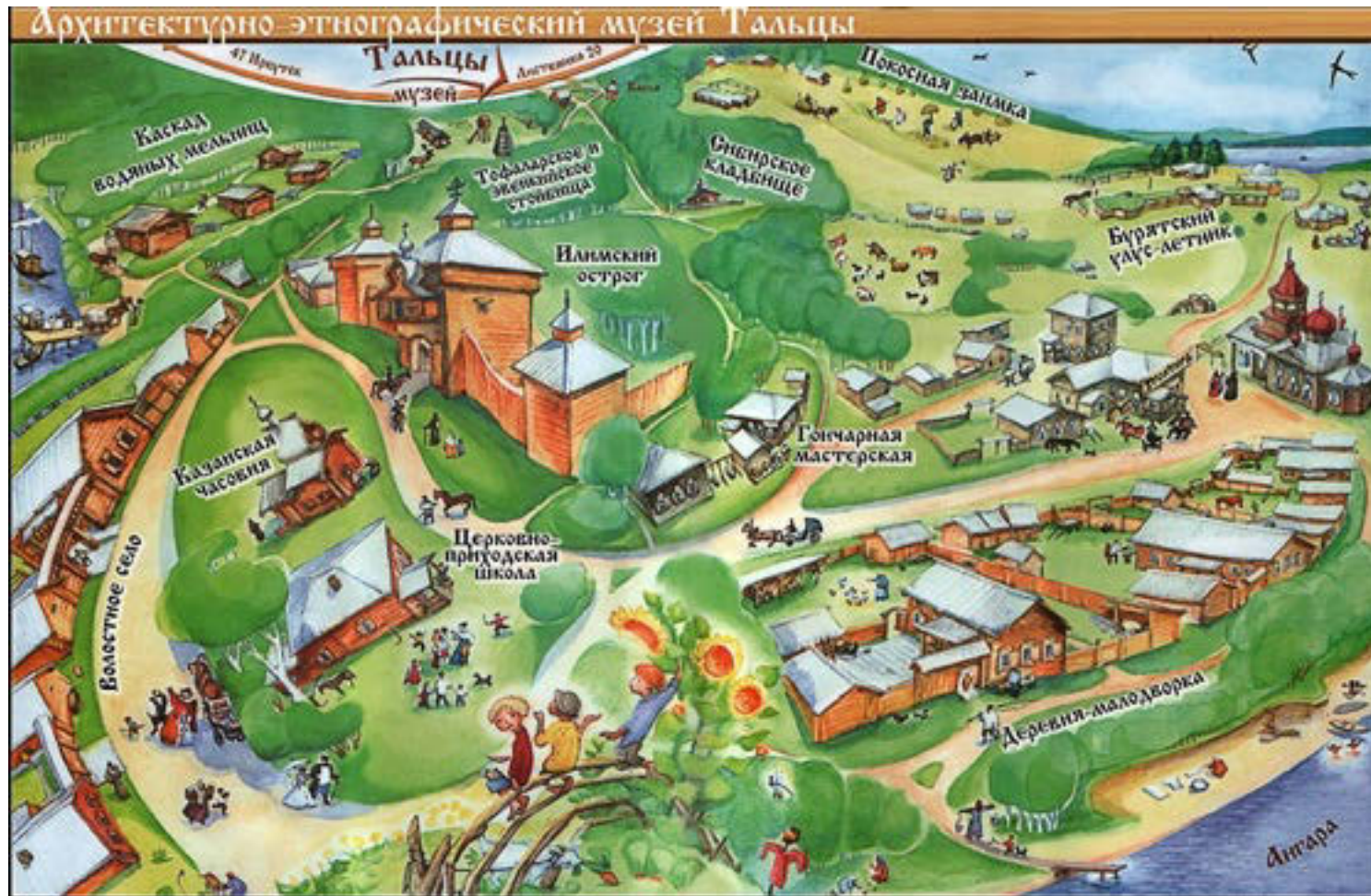




Listvyanka is the site of the Limnological Institute of the Russian Academy of Sciences. It studies the lakes and man-made reservoirs of Siberia and the Russian Far East, with particular focus on Lake Baikal. The institute has a small but very interesting museum of the Baikal's flora. <http://listvyanka.info/>



Architectural-ethnographic museum "Taltsy"





Architectural-ethnographic museum "Taltsy" is a unique storage of history and culture of the peoples of Eastern Siberia. The museum is located in a picturesque place on the right bank of the Angara River on Taltsinsky tract on 47th kilometer of Baikalsky tract on the way from Irkutsk to Lake Baikal. Territory of the Museum is 67 hectares. It is composed of more than 40 historical and architectural monuments and 8000 exhibits of great historical value.



The Museum attracts visitors not only with rich natural landscapes, but also with the possibility to get acquainted with material and spiritual culture of the peoples of the Baikal region - Russian, Buryat, and Evenki. Expositions of the museum tell about life and the peculiarities of life, customs and traditions of the peoples of the Baikal region in XIX-XX centuries. Original and majestic Siberian folk architecture attracts particular attention of tourists.

Ol'khon Island (Central Baikal)

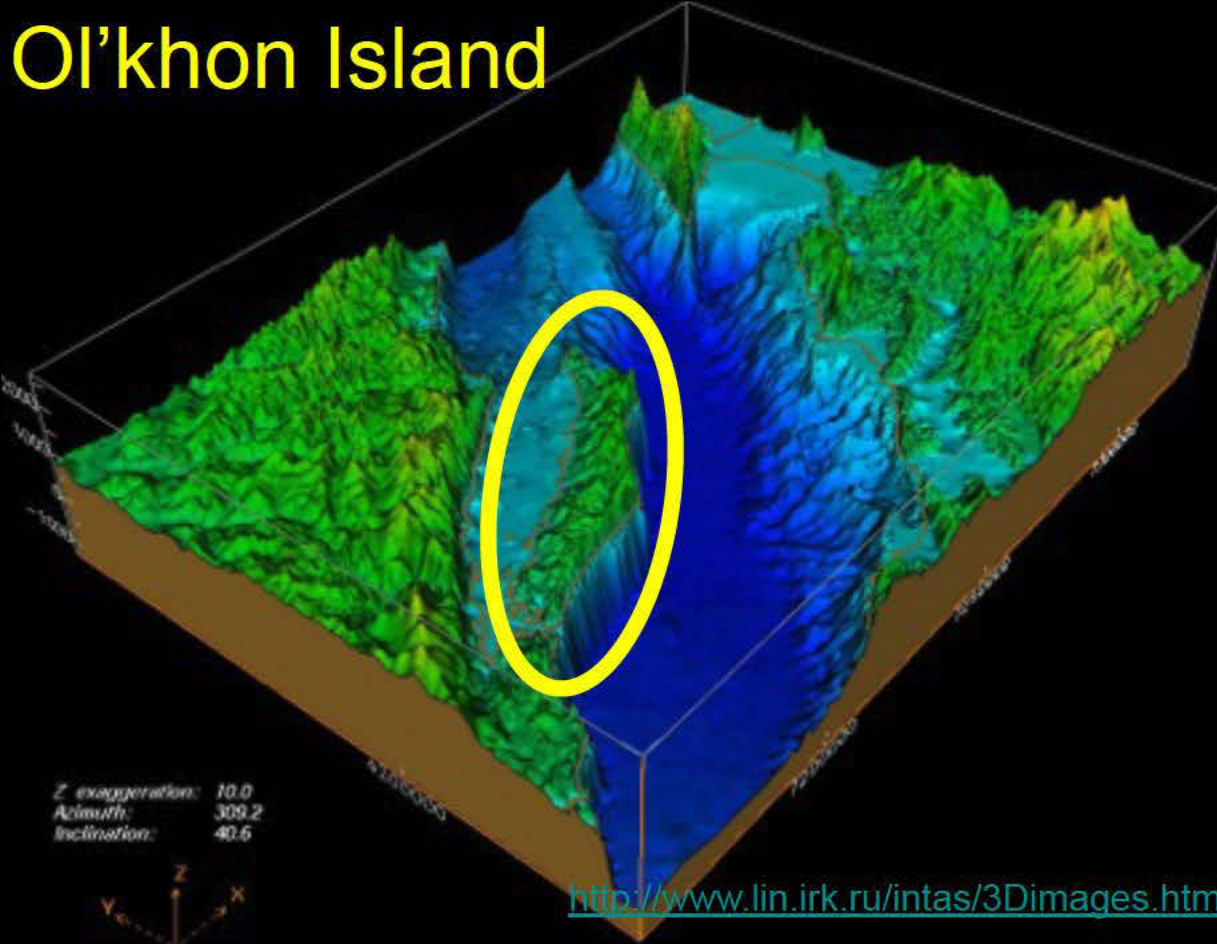


The Ol'khon region is situated on the western coast of the Baikal Lake (southern part of East Siberia)

Landsat-7 (2000)
TM image



Ol'khon Island



Ol'khon is the third-largest lake-bound island in the world. It is by far the largest island in Lake Baikal in Eastern Siberia, with an area of 730 sq. km

Structurally, it acts as the southwestern margin of Academician Ridge. The island measures 71.5 km in length and 15-25 km in width. The island's appearance is a result of tectonic activity in central part of Baikal basin in Cenozoic period.

Two deep straites Maloe More and Ol'khonskye Vorota separate the Ol'khon Island from the "mainland" and peninsula...

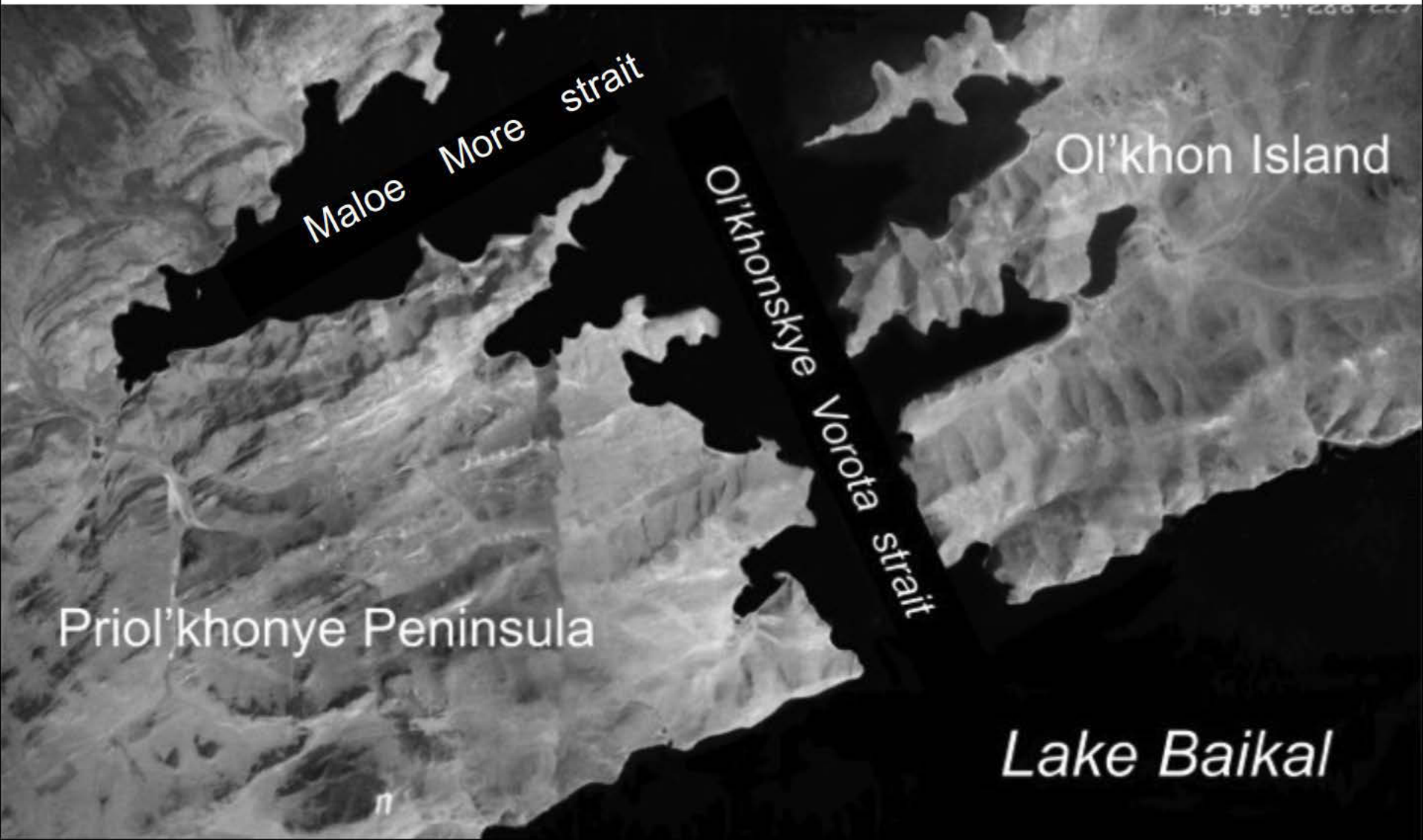




Photo plan of Maloe More strait, Olkhoskye Vorota strait, Ol'khon Island and Priolkhonye peninsula (view from northwest)

Olkhon is the most beautiful and mysterious place at the lake. The climate and landscape here are different from the rest of the lake. Average temperature in summer time is 20-23°C above zero, many sunny days, rains are seldom. In winter there is not much snow, windy, temperature is about -20°C.





Nature of Olkhon is outstandingly various: there are gorgeous sandy beaches, spacious steppe hills, dramatic capes, pine-tree forests and picturesque rocks, beautifully coloured with yellow, red, orange lichens.





The island is large enough to have its own lakes, and features a combination of taiga, steppe and even a small desert...



Lake Baikal's deepest point (1637 m) is near the Eastern Shore of the Island.

On the island there are several small lakes, the highest mountain is the forbidden Zhima Peak, 1300 m-high, long time a place for shaman's ceremonies and funerals.

Olkhon Island has several archaeological sites, beginning with the remains of an Iron Age fortress built by mysterious Kurykans, the ancient Chinese people who lived here between 500 and 1000 AD.



The remains of an ancient stone wall on the cape Shara-Shulun, the Northern coast of the Olkhon island.

At the left it is possible to see the ditch remains. The monument is dated the V-X centuries AD (late Iron Age). The wall partitioned off the Shara-Shulun cape on an isthmus, had length about 180 m and width - 1-1.3 m. The wall was found by B.E.Petri in 1912. It was destroyed in 1963.



The Island is famous as the centre of Shamanism, the common religion of the indigenous peoples of Siberia - Buryats. Many of the shamans sacred places and rock paintings are still found here. The biggest settlement of Olkhon is the fishing village of Khuzhir with population of about 2.000 people .

Photos from <http://irkipedia.ru/content/shamanizm>



Tunka Valley (Buryatia Republic)



The Tunka valley is considered to be one of the natural pearls of Buryatia. It is the continuation of the Baikal rift zone and having stretched almost 200 kms long, it occupies the territory bigger than the territory of Belgium, for instance.



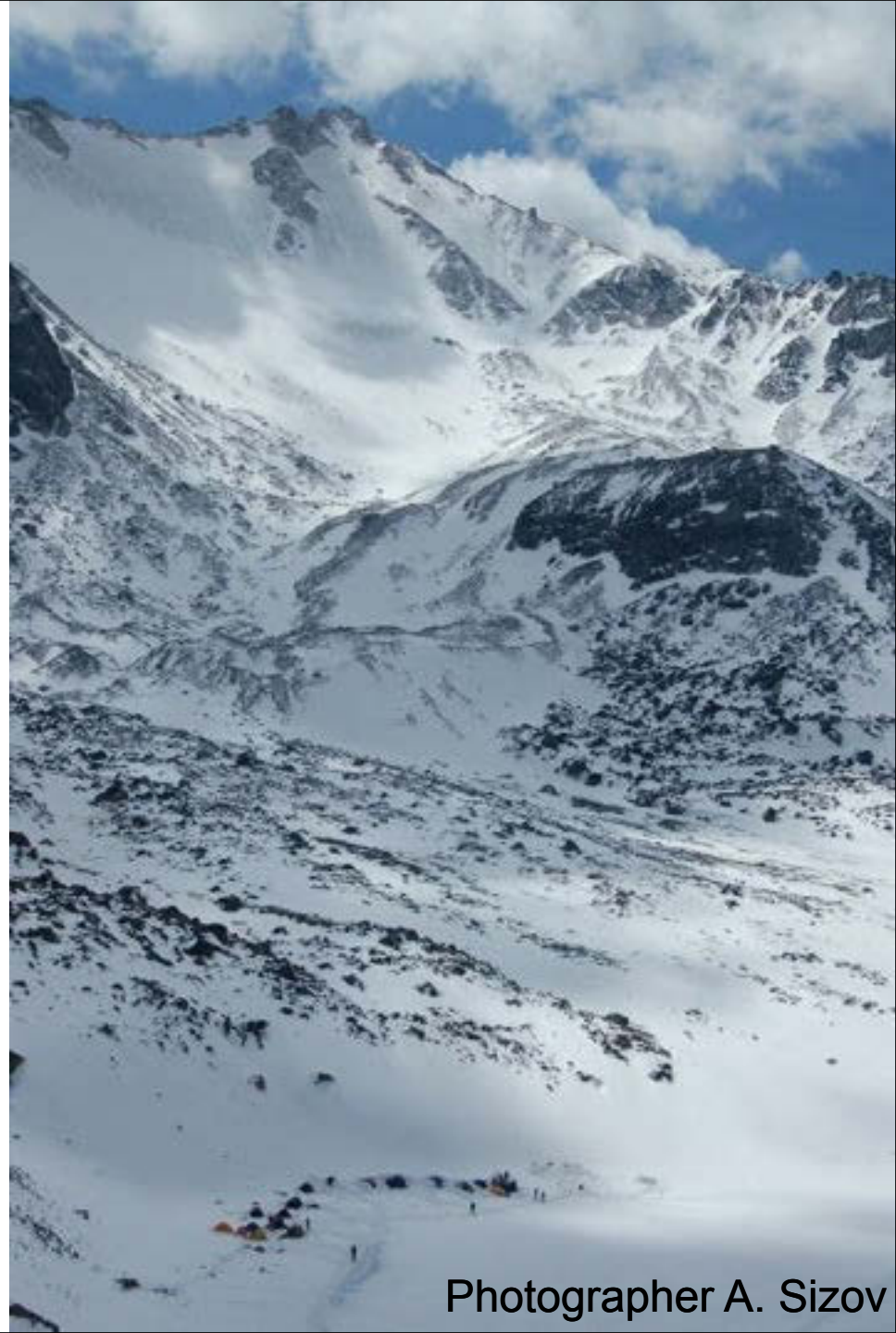
The valley has received its name from the ethnonym "tunken", known since XIII century. The name is connected to the missed tribe of Kerait-Tunkaits. These tribes lived on the banks of the rivers Onon, Kerulen (Mongolia), Selenga, and probably the Irkut. The information about the Tunkaits is rather poor. Owing to the records of Rashid-ad-Din it is known, that under the order of Chingis-khan these tribes were gathered in his troops under his banners and participated in his campaigns.



One of the most attractive wild areas for all kinds of travelers and adventurers, photographers as well, it was named after a small river that leaves deep and narrow canyon in the ridges for flat plains of the valley.

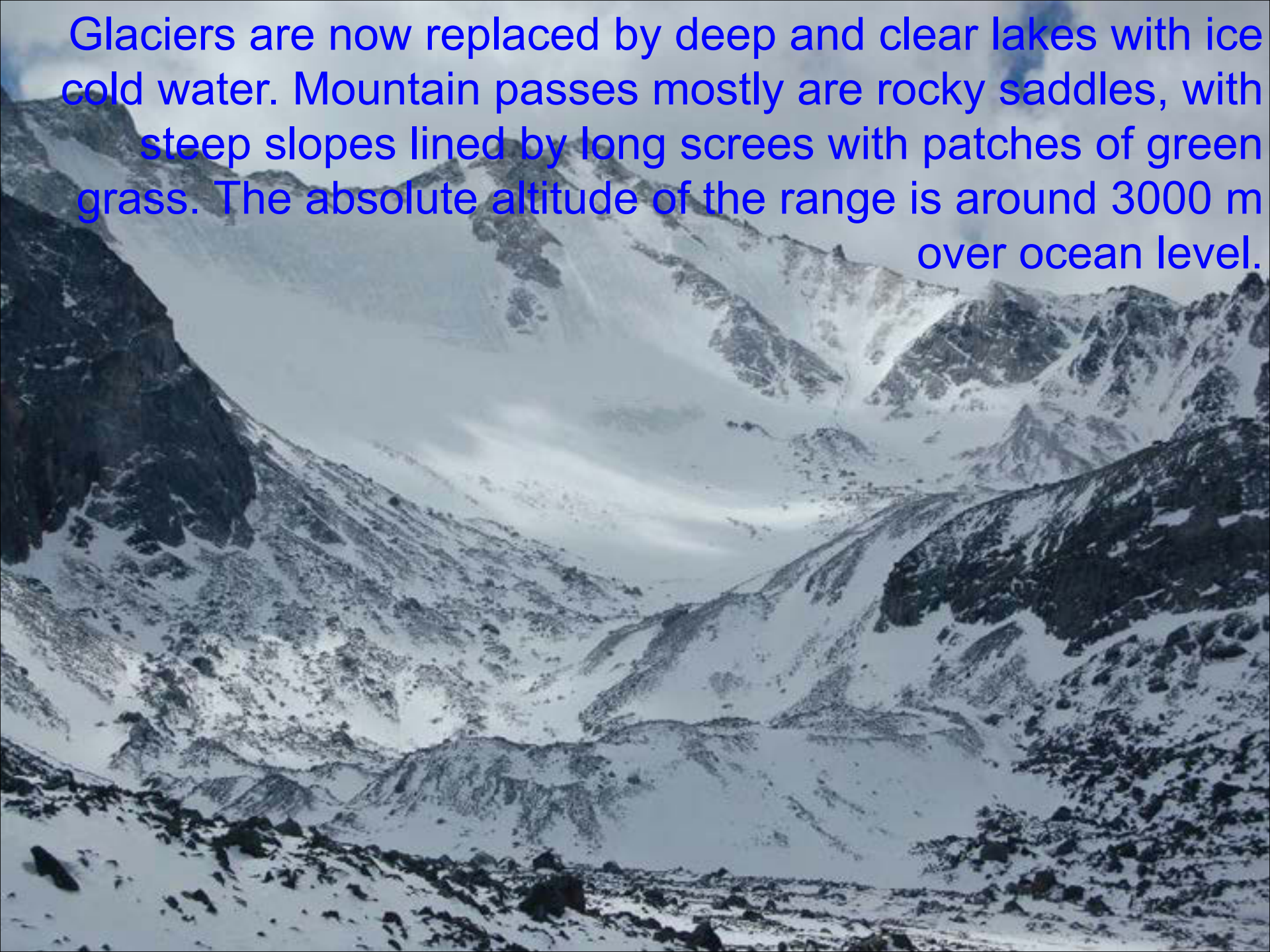
The Tunka Vally is sprinkled with settlements as it is good for agriculture and herding, with rich soils and good pastures. Area is populated with Siberia indigenous Buryat people, the descendants of Mongols, mainly busy in cattle breeding and agriculture. The region is well-known among adventurers first of all because of Tunkinsky Range of Eastern Sayan mountain country.

The climate in whole is continental, summers are long and mild, wintertime is characterized by strong frosts starting from November and fading out in February. The whole area bears traces of ancient glaciation, with sharp pyramid summits and deepened cirques, hemmed around with old moraines, the ridges of a sierra type with vertical rock faces and steep cliffs.



Photographer A. Sizov

Glaciers are now replaced by deep and clear lakes with ice cold water. Mountain passes mostly are rocky saddles, with steep slopes lined by long screes with patches of green grass. The absolute altitude of the range is around 3000 m over ocean level.



Surrounding taiga (Boreal forest) is abundant with wildlife and different kinds of wild berries, such as raspberry, redberry (Russian "brusnika", also called as bilberry), blueberry (Russian "golubika"), huckleberry (Russian "chernika"), bittersweet (honeysuckle) and others. Partly taiga consists of Siberian stone pine which is called "cedar" by locals. The nuts of this tree previously served a perfect raw material for cedar oil, that was replaced by sunflower oil later.



<http://images.rambler.ru/>



Along the southern foot of the Tunkinskiy Goltsy Range there are a lot of spots with mineral water springs which are utilized by people as a medicine for a number of diseases. The most popular and wellknown are two of them - Arshan and Nilova Pustyn resorts, spa villages with developed infrastructure, good warm curative baths, drinking water springs, hotels and hostels and small cafes along the streets.





Photographer A. Shchetnikov



<http://mr-melnik.narod.ru>

Since 1980 yr. the whole territory of Tunka region announced a National park.

Tatiana Skovitina & Francesco Angelelli