International Society for Salt Lake Research
Institute of General and Experimental Biology SB RAS
Institute of Biophysics SB RAS
Institute of Natural Resources, Ecology and Cryology SB RAS
Buryat State University
The Government of the Republic of Buryatia
Russian Hydrobiological Society

13TH INTERNATIONAL CONFERENCE ON SALT LAKE RESEARCH (ICSLR 2017)

P R O G R A M

August 21–25, 2017, Ulan-Ude, Russia

Ulan-Ude
Buryat State University Publishing Department
2017

WELCOME FROM ORGANIZING COMMITTEE

Dear colleagues!

It is great pleasure for us to welcome participants of the 13th International Conference on Salt Lake Research. Conferences of International Society for Salt Lake Research are held triennially. This year several Siberian academic research institutes, part of the Siberian Branch of Russian Academy of Sciences, and Buryat State University host the conference in the city of Ulan-Ude, Republic of Buryatia, Russia. As usual, our aim is to provide an opportunity for networking amongst researchers who are globally dispersed.

The city of Ulan-Ude, the capital of Republic of Buryatia, is located in a very specific area. It is trans Baikal territory. The largest in the world freshwater lake is located just 100 km to the north from the city. Somebody may argue that Lake Baikal somehow not belongs to saline lakes. However, there is no borders in science. We believe that many research questions related to aquatic habitats and ecosystems are common. It is strange that studies of freshwater and saline lakes are partially separated. This division is evident when we check programs of limnological or lake conferences. However many fields of science nowadays converge and look for new cross-disciplinary discoveries. We decided that the slogan of our conference would be "Studies of saline and freshwater lakes: In search for a common ground". We are sure that focus not only on traditional topics such as chemistry, biology of physics of saline lakes but also on comparative studies of freshwater and saline lakes will bring new ideas and future fruitful projects.

This time we pay special attention to young scientists. Several funding opportunities were provided to participate in the conference. Traditionally, Bill Williams award will honour best oral and poster presentations by students. There was strong competition between young scientists that applied for travel grants. Award for the best paper on saline lake research was also established. The winners of the award will not only get the prize but also will be honoured with an opportunity to present plenary lecture.

Diverse scientific program will be accompanied by pre, mid and post conference field trips to local salt lakes, lake Baikal and natural landscapes. It is great opportunity to get fascinating insights, find new friends and colleagues.

Welcome to the city of Ulan-Ude! Enjoy science and nature of saline and freshwater lakes!

Egor Zadereev, Vice-president of the International Society for Salt Lake Research, leading research scientists at the Institute of Biophysics SB RAS (Krasnoyarsk)

Leonid Ubugunov, the Chairman of the Local Organizing committee, the Head of the Institute of General and Experimental Biology SB RAS (Ulan-Ude)

MEMORY OF PROF. BAIR NAMSARAEV
(1943-2015)

The organization of the 13th International Conference on Salt Lake Research in Ulan-Ude, Republic of Buryatia, Russia, was initiated by the outstanding microbiologist, Prof. B. Namsaraev, the Honored worker of science of Russian Federation, who deceased on September 5, 2015, at the age of 72.

Bair was born in 1943 in the small village in Southern Siberia in the family of a school teacher. He had 6 brothers and sisters. After school he worked on the collective farm and served in the Soviet Army. In 1965 he entered Moscow State University. After graduating in 1970 Bair started his PhD work on the hydrogen oxidizing bacteria at the Institute of Microbiology in Moscow. Since 1973 he worked at the Institute of Physiology and Biochemistry of Microorganisms in Pushchino. Bair travelled all the oceans studying sulfate reducing bacteria and methanogens in the bottom sediments. He continued his research after return to the Institute of Microbiology in 1985, collaborating with the Center for Great Lakes Studies (Milwaukee, Wisconsin) and the Institute of Oceanology (Havana, Cuba). Prof. B. Namsaraev contributed greatly to the studies of microbial processes in marine and freshwater ecosystems (the hydrotherms of the Pacific Ocean and Kuril Islands, the salt marshes of Cuba, sediments of the Black, Baltic, Japan, Carribean and Kara Seas, the Indian Ocean, lakes Michigan and Baikal).

After the work in the leading western institutes he returned to his native South Siberian steppes to study salt and soda lakes. Being a well-known scientist, in 1993 he left Moscow for Ulan-Ude which is situated 5 000 km far to the East, next to the Russian-Mongolian and Russian-Chinese border. This region has merely been studied by microbiologists before in spite of the fact that there are plenty of interesting objects (Lake Baikal, hot springs and hundreds of salt and soda lakes). Prof. B. Namsaraev knew the region very well. One of the lakes that he studied deeply, Lake Khilganta, is situated only 50 km far from his native village Suduntuy. In Ulan-Ude he created the Laboratory of Microbiology which has soon become one of the leading institutes in Russia studying extreme environments. The studies of Prof. B. Namsaraev have also been focused on the influence of microorganisms on the condition of Lake Baikal ecosystem, the estimation of biotechnological potential of microorganisms of the extreme environments and the research of the medicinal properties of mineral waters and slit of the hydrotherms and lakes.

Prof. Namsaraev was an outstanding scientist who published more than 300 scientific articles and was the supervisor of 38 PhD students who worked in all parts of Russia, from Moscow to Yakutsk and Ulan-Ude. He supported the interaction and collaboration between many scientific groups in Russia and worldwide. Prof. B. Namsaraev was awarded with the medal of Agvan Dorzhiev, one of the highest awards of Republic of Buryatia, and also with the ranks of the Honoured worker of science of the Russian Federation and Honoured worker of higher education of the Russian Federation according to his merits. His colleagues have isolated and described the new species of bacteria named after him: *Alkaliphilus namsaraevii* sp. nov. One of the scientific sections of the conference will be dedicated to the memory of Prof. B. Namsaraev.

CONFERENCE COMMITTEES

INTERNATIONAL ORGANIZING COMMITTEE

Naser Agh (Urmia University, Iran)
Lucila Castro (Pacific Biodiversity Institute, Argentina)
Peri Coleman (Delta Environmental Consulting, Australia)
Belinda Datson (Actis Environmental Services, Australia)
Andrei Degermendzhy (Institute of Biophysics of SB RAS Russia)
Tianlong Deng (Tianjin University of Science and Technology, China)
Endon Garmaev (Baikal Institute of Nature Management SB RAS, Russia)
Sergey Golubkov (Zoological Institute of RAS, Russia)
Vladimir Gorlenko (Federal Research Centre Fundamentals of Biotechnology, Institute of Microbiology RAS, Russia)
Ramesh Gulati (Netherlands Institute of Ecology, Netherlands)
Erik Jeppesen (Aarhus University, Denmark)
Fanjing Kong (Institute of Mineral Resources, China)
Zorigto Namsaraev (National Research Centre Kurchatov Institute, Russia)
Aharon Oren (Hebrew University, Israel)
Nicolai Pimenov (Federal Research Centre Fundamentals of Biotechnology, Institute of Microbiology RAS, Russia)
Aleksei Plusnin (Geological Institute SB RAS, Russia)
Aleksei Ptitsyn (Institute of Natural Resources, Ecology and Cryology SB RAS, Russia)
Nickolai Shadrin (Institute of Biology of the Southern Seas RAS, Russia)
Jeff Thornton (International Environmental Management Services Ltd., USA)
Leonid Ubugunov (Institute of General and Experimental Biology SB RAS, Russia)
Michail Yakimov (Italian National Research Council, Italy)
Egor Zadereev (Institute of Biophysics SB RAS, Russia)
Mianping Zheng (Center for Saline Lake and Epithermal Deposits, China)
Nikolai Moshkin (Buryat State University, Russia)

LOCAL ORGANIZING COMMITTEE

Chairman – **Leonid Ubugunov**, the Head of the Institute of General and Experimental Biology SB RAS
Vice-Chairman – **Bair Zhalsanov**, Minister of the Education and Science of the Republic of Buryatia
Vice-Chairman – Nikolai Moshkin, Rector of Buryat State University
Conference Secretary – **Svetlana Zaitseva**, Institute of General and Experimental Biology SB RAS
Darima Barkhutova (Institute of General and Experimental Biology SB RAS)
Egor Zadereev (Institute of Biophysics SB RAS)
Oxana Vishnyakova (Institute of General and Experimental Biology SB RAS)
Oleg Anenkhonov (Institute of General and Experimental Biology SB RAS)
Darima Baldanova (Institute of General and Experimental Biology SB RAS)
Anton Budunov (Department of State Environmental Expertize and Biodiversity Conservation of the Ministry of Natural Resources of Republic of Buryatia)
Vyacheslav Khakhinov (Buryat State University)
Bairma Gyrgenova (Department of Science and Higher Education of the Ministry of Education and Science of the Republic of Buryatia)
Lyudmila Kozyreva (Institute of General and Experimental Biology SB RAS)
Evgeniya Matyugina (Institute of Natural Resources, Ecology and Cryology SB RAS)

WORKING GROUP

Institute of General and Experimental Biology SB RAS
Elena Abidueva
Bato Baldanov
Larisa Balsanova
Tuyana Banzaraktsaeva
Valentina Budagaeva
Saveliy Buryukhaev
Olga Dagurova
Vyacheslav Dambaev
Ekaterina Dambinova
Erzhena Danilova
Elena Erdyneeva
Elena Lavrentjeva
Irina Lavrentjeva
Aryuna Radnagurueva
Yuri Rupyshev
Bayarma Tsydenova
Enkhe Tsyrempilov
Dulma Tsyrenova

Buryat State University
Roman Abasheev
Lyubov Buyantueva
Aleksey Gulgenov
Elena Nikitina

GENERAL INFORMATION

Conference Dates
21-25 August 2017

Conference Venue
Buryat State University, Ranzhurova Street, 4, 670000, Ulan-Ude, Russia
Big Hall**,** 6th floor
Small Hall, 4th floor

Language
The official language of the Conference is English

Conference Secretariat
Address: Institute of General and Experimental Biology SB RAS,
Sakhyanovoy st. 6, Ulan-Ude, Russia
E-mail: saltlakes2017@gmail.com
Phones: 07 3012 434902; +7 914 8378678 (Svetlana Zaitseva)
Website: http://www.icslr2017.ru/

Registration
The registration desk will be opened on August, 20th, from 15.00 to 19.00 in the Lobby of Buryat State University, 1st floor (Ulan-Ude, Ranzhurova St., 4). On August, 21th registration desk will be opened at 8.30 in the Lobby of Buryat State University, 6th floor in front of the Big Hall, and held throughout the meeting period.

Registration fee
Registration fee covers admittance to the scientific sessions, coffees and lunches, mid-conference excursion to Lake Baikal, Welcome Reception. The membership fee of the ISSLR (60 USD for professionals, 20 USD for graduate students for 3 subsequent years) is also included in the registration fee.

Payment before May 15, 2017
- Professionals 280 USD
- Students 160 USD

Payment after May 15, 2017
- Professionals 300 USD
- Students 180 USD

Registration fee can be paid in cash (USD or equivalent in rubbles) directly at the registration.

Conference dinner
Conference dinner will be organized in Banquet Hall "Grand Yurta" (Ulan-Ude, Verkhnyaya Berezovka, 37) on August 24, 2017. The price for the conference dinner is not included into the registration fee. The cost of conference dinner is 2000 rubles. Conference dinner can be paid in cash (rubbles or equivalent in USD) directly at the registration.

Currency
The official Russian currency is Russian rubble. The exchange rate to international currencies may fluctuate. The approximate exchange rate is 1 USD – 60 rubbles, 1 EURO – 70 rubbles, 1 CNY - 9 rubbles. Official exchange rate can be checked at http://www.cbr.ru/eng/currency_base/

Please avoid currency exchange in not authorized places or with individuals. If you need to exchange your currency, ask organizers to help you.

Bank machines
Usually bank machines accept all international bank cards (VISA, MASTERCARD). Also bank cards are accepted in almost all restaurants, hotels and big shops in Ulan-Ude. Some small shops and cafй may not accept cards. There is a bank machine directly in the University.

Certificates of Attendance
Certificates of Attendance will be handed out at the registration desk.

Time zone
Ulan-Ude, Russia is GMT/UTC + 8
Russia Time Zone 7 – Moscow + 5
Ulan-Ude, Russia does not utilize Daylight Saving Time

Safety
In general Ulan-Ude is safe and friendly city. Still, please follow the usual safety precautions. Avoid night walks in remote places, beware of pickpockets, do not demonstrate in public large amounts of money. In case of any problems immediately contact the organizing committee.

ORAL AND POSTER PRESENTATION

Plenary talks. The time slot for a plenary talk is 30 minutes including the discussion.

Regular oral talks. The time slot for an oral presentation is 20 minutes including the discussion.

Presentations should be provided in Power Point (PPT or PPTX) or PDF format and uploaded at least half a day before the talk to the presentation computer. Please, name the presentation file by your surname, without any special characters.

A remote-control for presentations which includes a laser pointer will be available but you will also be able to use mouse and keyboard if preferred. In case you have special requirements (e.g., want to use your own computer), contact the organizers in advance.

Posters. The preferred poster format is A0 Portrait (84.1Ч118.9 cm).
Posters shall be displayed in the lobby of Big Conference Hall on Tuesday (22 August) morning. Please use your poster number to display the poster at appropriate place. Posters will be displayed in the lobby from Tuesday, 22 to Thursday, 24.

PROCEEDINGS OF THE CONFERENCE

It is our intention to publish the proceedings of the conference in two journals: the Chinese Journal of Oceanology and Limnology and the Journal of Siberian Federal University. Biology.

Guest editors for the special issues will be Aharon Oren, Mianping Zheng, Egor Zadereev, Nickolai Shadrin and Tianlong Deng.

Authors who want to submit their work for publication should first decide to which journal to submit.

Chinese Journal of Oceanology and Limnology (CJOL) accepts high-quality articles on aspects of oceanology (oceanography) and limnology, including biology (bioinformatics, bioengineering), physics (mathematical and computational physics), geology (sedimentology,

geophysics, paleontology, geochemistry), chemistry (geochemistry, biochemistry), hydrology, meteorology, and geography; and those in practical coverage: aquaculture, marine resource exploration, remote-sensing, environmental protection, marine engineering, pharmacology, and instrumentation.
http://www.springer.com/earth+sciences+and+geography/oceanography/journal/343

Journal of Siberian Federal University. Biology (JSFU.Bio) is a multidisciplinary periodical, which publishes peer-reviewed, original papers that describe research in all areas of biology, such as general and theoretical biology, biochemistry, biophysics, biotechnology, physiology, zoology, botany, ecology, and soil science.
http://journal.sfu-kras.ru/en/series/biology

Authors should carefully read the instructions to authors of the journal of their choice and follow these instructions exactly, including the format of references citations in the text and in the list of references.

Papers should be submitted **NO LATER THAN OCTOBER, 20, 2017** to the conference organizer (e-mail address: isslr.official@gmail.com). Please submit the paper as a Word file, including the tables and figures on separate pages at the end of the manuscript; please do not embed the tables and figures within the manuscript text. On the title page, please indicate the full affiliation and the e-mail addresses of all authors, indicating the name of the corresponding author.

The team of guest editors will first judge papers. They will check the manuscripts for scientific quality, format, and the level of the language. The editorial team may suggest changes and request revisions, make minor technical editorial corrections (format, language), and they can reject papers if to their opinion the scientific quality is insufficient or the papers are otherwise problematic.

Manuscripts that have passed this first stage of quality control will be transferred to the editorial office of the respective journal. The editors-in-chief of the journal may send the papers out for review by external reviewers, and they reserve the right to reject papers that had passed the first round of quality control by the team of guest editors.

We are looking forward to receiving many good-quality manuscripts until October 20 to be processed as quickly as possible toward the publication of the meeting proceedings.

SOCIAL PROGRAM

August 21, 2017
10.00 The Opening Ceremony (Big conference hall of Buryat State University)
13.00 Group photo near entrance of Buryat State University
18.30 Welcome party (Lobby of Big conference hall of Buryat State University)

August 23, 2017
08.00 Excursion to the Lake Baikal and Baikal State Reserve. (Conference participants will be divided into two groups, buses will depart from Buryat State University at 08.00 and 09.00).

August 24, 2017
19.00 Conference dinner (Banquet Hall “Grand Yurta”, Ulan-Ude, Verkhnyaya Berezovka, 37). Transfer to the restaurant from Buryat State University at 18.00.

August 25, 2017
The Closing Ceremony (Big conference hall of Buryat State University)

PROGRAM OVERVIEW

20.08.2017 Sunday

Time	Lobby of Buryat State University, 1st floor (Ulan-Ude, Ranzhurova St., 4)
15.00 – 19.00	**Registration**

21.08.2017 Monday

Time	Big Conference Hall, 6th floor	Small Conference Hall, 4th floor
08.30 – 10.00	**Registration**	
10.00 – 11.00	**Opening ceremony**	
11.00 – 13.00	**Plenary session**	
14.30 – 18.20	**Regular session** Inland lakes in a changing world: anthropogenic and climate change effects on salinity, ecology and biogeochemical cycling	**Regular session** Geology and geochemistry of salt lakes
18.30 – 20.30	**Welcome party**	

22.08.2017 Tuesday

Time	Big Conference Hall, 6th floor	Small Conference Hall, 4th floor
09.00 – 10.00	**Plenary session**	
10.00 – 16.20	**Special session** Microbiology of saline lakes (dedicated to the memory of Prof. B.B. Namsaraev)	
14.00 – 14.40		**Regular session** Aquaculture development
15.00 – 16.20		**Regular session** Physical processes and modelling
16.20 – 18.00	**Poster session**	
18.00 – 19.30	**Demonstration of film about Aral Sea by Dr. Nikolai Aladin**	

23.08.2017 Wednesday

8.00 - 22.00	**Excursion to the Lake Baikal and Baikal State Reserve**

24.08.2017 Thursday

Time	Big Conference Hall, 6th floor	Small Conference Hall, 4th floor
09.00 – 10.00	**Plenary session**	
10.30 – 12.30	**Regular session** Services provided by salt lakes: from chemical resources to cultural and social services	**Regular session** Salt lake–landscape interactions, watershed studies
14.00 – 15.40	**Regular session** Biochemical aspects of saline lake studies	**Regular session** Paleolimnology: environmental change recorded by salt lake sediments
16.30 – 18.00	**General meeting of the International Society for Salt Lake Research (all of the Conference participants)**	
19.00 – 22.00	**Conference dinner** (Banquet Hall "Grand Yurta", Ulan-Ude, Verkhnyaya Berezovka, 37)	
14.00 – 16.00	Conference Hall of Institute of General and Experimental Biology SB RAS, Ulan-Ude, Sakhyanovoi St., 6 **Round table discussion** The saline soils: genesis, evolution, classification and conceptual and methodical approaches of their studying in the 21st century	

25.08.2017 Friday

Time	Big Conference Hall, 6th floor
09.00 – 12.30	**Regular session** Salt lake ecology and biology, food webs and biogeochemical cycling
14.00 – 15.20	**Regular session** Comparative studies of saline and freshwater lakes
15.20 – 16.00	**Closing ceremony**

26.08.2017 Saturday

Departure to post-conference tours

CONFERENCE SCIENTIFIC PROGRAM

MONDAY, AUGUST 21

BIG CONFERENCE HALL OF BURYAT STATE UNIVERSITY

10.00 Opening Ceremony

PLENARY SESSION. *Chair:* Brian Timms

11.00 **Mianping Zheng**
Center for Saline Lake and Epithermal Deposits, Chinese Academy of Geological Sciences, China
Thoughts on salt science

11.30 Coffee break

12.00 **Erik Jeppesen**
University of Aarhus, Denmark
Climate change effect on lakes: similarities and differences in response of freshwater and saline lakes

12.30 **Oleg Anenkhonov**
Institute of General and Experimental Biology SB RAS, Russia
Terrestrial ecosystems associated with salt lakes in Transbaikalia, Eastern Siberia: environments, diversity, and prospects for further biological studies

13.00 **Group photo**

13.30 Lunch

REGULAR SESSION
Inland lakes in a changing world: anthropogenic and climate change effects on salinity, ecology and biogeochemical cycling
Chairs: Erik Jeppesen, Naser Agh

14.30 **Naser Agh**
Artemia & Urmia Lake Research Institute, Iran
Geomorphologic changes of Lake Urmia and its negative effects on restoration programs

14.50 **Nikolai Aladin**
Zoological Institute RAS, Russia
The past and future of the biological resources of the Caspian and the Aral seas

15.10 **Belinda Datson**
Actis Environmental Services, Australia
Ecological evaluation of the effects of mine dewatering on a lake in the great western woodlands of Western Australia. Monitoring of Chalice West Lake from 2010 to 2016, after dewatering of Chalice Pit

15.30 **Endon Garmaev**
Baikal Institute of Nature Management SB RAS, Russia
Effects of climate change on the water balance of Lake Baikal

15.50 **Jonathan Clark**
Department of Zoology, Weber State University, USA
Genetic studies of invertebrate diversity in the Great Salt Lake ecosystem

16.10 **Zorigto Namsaraev**
NRC "Kurchatov Institute", Russia
Combating eutrophication in Lake Baikal need comprehensive solutions

16.30 Coffee break

17.00 **Lucila Castro***
National University of Cyrdoba, Argentina
Salt lakes of South America, flamingos and climate change

17.20 **Nikolai Shadrin**
The A. O. Kovalevsky Institute of Marine Biological Research of RAS, Russia
Multiplicity of the alternative ecosystem stable states and adaptive environmental management: saline lake ecosystems and salinology

17.40 **Lubov' Vesnina**
Altai Branch of FSBI "Gosrybcenter", Russia
Ecosystem of the hypersaline lakes of Ob-Irtysh interfluves

18.00 **Yang Zhenjing**
Institute of Hydrogeology and Environmental Geology, Chinese Academy of Geological Sciences, China
Vegetation characteristics and environmental changes since the last interglacial period in Western Qaidam Basin

18.30 Welcome party
Lobby of Big conference hall of Buryat State University

MONDAY, AUGUST 21

SMALL CONFERENCE HALL OF BURYAT STATE UNIVERSITY

REGULAR SESSION
Geology and geochemistry of salt lakes
Chairs: Aleksey Plusnin, Weigang Kong

14.30 **Svetlana Doroshkevich**
Geological Institute SB RAS, Russia
The distribution of chemical elements in the landscapes of sulphate and soda lakes (West Transbaikalia)

14.50 **Marina Kolpakova***
Sobolev Institute of Geology and Mineralogy SB RAS, Tomsk Polytechnic University, Russia
Geochemical features of endorheic saline lakes of Kulunda Steppe (Western Siberia, Russia)

15.10 **Nina Ma**
MLR Key Laboratory of Saline Lake Resources and Environments, Institute of Mineral Resources, Chinese Academy of Geological Sciences, China
Research progress and application of uranium-series dating method on saline lake of Tibet Plateau

15.30 **Xinsheng Niu**
Institute of Mineral Resources, China
The geochemical characteristics and mineral deposits of travertine of tangqungmai in Tibet, China

15.50 **Yousheng Tao**
CAS Key Laboratory of Design and Assembly of Functional Nanostructures, R&D Center of Saline Lake and Epithermal Deposits, China
Comparative study on the adsorption and separation of lithium and magnesiumions from aqueous solutions by nanocarbons and zeolites

16.10 **Zuoliang Sha**
Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China
Electrochemically selective extraction of lithium from seawater and brine

16.30 Coffee break

17.00 **Huan Zhou**
Tianjin University of Science & Technology, China
Thermodynamic representation of the stable phase equilibria and salt-forming dynamic for typical salt-lake brine

17.20 **Fu Fan**
Institute of Mineral Resources Chinese Academy of Geological Science, China
Difference of geochemical character of M56 subsection from the Majiagou formation in the salt basin from the East Erdos basin

17.40	**Vyacheslav Khakhinov** *Buryat State University, Russia* *Baikal Institute of Nature Management SB RAS, Russia* **Salt lakes hydrochemistry of the Baikal Rift Zone**
18.00	**Elaheh Hasan Nataj Niazi*** *Artemia and Urmia Lake Research Institute, Iran* **Fluctuations in physicochemical characteristics of Urmia Lake water between 2016 and 2017**
18.30	Welcome party Lobby of Big conference hall of Buryat State University

TUESDAY, AUGUST 22

BIG CONFERENCE HALL OF BURYAT STATE UNIVERSITY

SPECIAL SESSION
Microbiology of saline lakes (dedicated to the memory of Prof. B.B. Namsaraev)

PLENARY SESSION
Chair: Nikolai Pimenov

9.00 **Vladimir Gorlenko**
Federal Research Centre «Fundamentals of Biotechnology» RAS, Institute of Microbiology RAS, Russia
Contribution of Prof. Bair B. Namsaraev in biogeochemistry and microbiological research of highly-mineralized soda lakes of South-East Siberia and Mongolia

9.30 **Julia Margit Aszalos**
Eųtvųs Lorand University, Hungary
Diversity of extremophilic bacterial communities hosted by two high-altitude saline lakes located in the Puna de Atacama Plateau, Chile

REGULAR SESSION
Chairs: Vladimir Gorlenko, Aharon Oren, Nikolai Pimenov, Zorigto Namsaraev

10.00 **Nikolai Pimenov**
Federal Research Centre «Fundamentals of Biotechnology» RAS, Institute of Microbiology RAS, Russia
A meromictic freshwater lake Svetloe (Arkhangelsk Region, Russia) as an illustration of modern concepts of the methane cycle microorganisms

10.20 **Anna Lomakina***
Limnological Institute SB RAS, Russia
Diversity of microbial communities in zones with a contrast mineralization of pore waters on Lake Baikal

10.40 Coffee break

11.10 **Elena Selivanova**
Institute for Cellular and Intracellular Symbiosis, Ural Branch of RAS, Russia
Comparative analysis of metagenomic data on prokaryotic diversity in the inland brackish and saline water bodies in the South-eastern European part of Russia

11.30 **Svetlana Zaitseva**
Institute of General and Experimental Biology SB RAS, Russia
Archaea and bacteria diversity along an increasing salt gradient in alkaline lakes

11.50 **Anastasia Kharcheva***
Lomonosov Moscow State University, Russia
Spectral methods for studying of green sulfur bacteria from five water bodies separated from the White Sea

12.10 **Mark Coleman**
Actis Environmental Services, Perth, Western Australia
16S DNA analysis as a method of investigating prokaryotes diversity in the benthic mat of solar salt fields

12.30 Lunch

14.00 **Anastasia Komova***
National Research Centre "Kurchatov Institute", Russia
Anoxygenic phototrophic bacteria of the Lake Krasnovishnevoye (Baraba Steppe)

14.20 **Attila Szabo**
ELTE Eotvos Lorand University, Hungary
Spatiotemporal patterns and adaptation mechanisms of planktonic microbial communities inhabiting alkaline soda pans of the Carpathian Basin

14.40 **Tsetseg Baljinova**
Institute of General & Experimental Biology, Mongolian Academy of Sciences (MAS), Mongolia
Phylogenetic diversity of actinobacteria in saline environments of Mongolia

15.00 **Tamas Felfűldi**
ELTE Eűtvűs Lorőnd University, Hungary
Sapientia Hungarian University of Transylvania, Romania
Planktonic microbial communities in heliothermal saline lakes of Transylvania, Romania (Southeastern Europe)

15.20 **Evgeniya Matyugina**
Institute of Natural Resources, Ecology and Cryology SB RAS, Russia
Effect of environmental factors on differentiation of microbial communities during day and night: study of meromictic Lake Doroninskoe, Transbaikalia, Russia

15.40 **Olga Pavlova**
Limnological Institute SB RAS, Russia
Influence of geochemical conditions on the structure and activity of methanogenic microbial communities: a case study of the bottom sediments from the methane seep Posolsk Bank

16.00 **Lyudmila Kozyreva**
Institute of General and Experimental Biology SB RAS, Russia
Microbial communities of two steppe soda lakes of South Zabaikalie

16.20 **POSTERS SESSION (with coffee break)**
Lobby of Big Conference hall of Buryat State University

18.00 **Demonstration of film about Aral Sea by Nikolai Aladin (Big Conference hall of Buryat State University)**

TUESDAY, AUGUST 22

SMALL CONFERENCE HALL OF BURYAT STATE UNIVERSITY

REGULAR SESSION. Aquaculture development
Chair: Egor Zadereev

14.00 **Liying Sui**
College of Marine and Enviromental Sciences, Tianjin University of Science and Technology, China
Supplementation of halophilic archaea improves *Artemia* biomass production in hypersaline culture conditions

14.20 **Ruy Lopes-dos-Santos***
Laboratory of Aquaculture & Artemia Reference Centre, Ghent University, Belgium
Halophilic bacteria and archaea as part of the *Artemia* diet

14.40 **Elena Anufriieva***
A. O. Kovalevsky Institute of Marine Biological Research of RAS, Russia
Can saline and hypersaline lakes contribute to aquaculture development?

REGULAR SESSION. Physical processes and modelling
Chair: Denis Rogozin

15.00 **Mohammad Hemmati**
Urmia University, Iran
3D numerical simulation of flow and salinity regimes in Lake Urmia

15.20 **Hojjat Ahmadi**
Urmia University, Iran
Numerical modelling of saltwater wedge under intruding and receding conditions

15.40 **Maksim Tarnovskiy***
Institute of Biophysics SB RAS, Russia
Siberian Federal University, Russia
Changes in the stratification regime of the saline Lake Shira (Siberia, Russia)

16.00 **Tatiana Yakubaylik**
Institute of Computational Modelling, Siberian Branch of Russian Academy of Sciences, Russia
Three-dimensional numerical simulation of water mixing processes in Lake Shira under wind stress in autumn

16.20 **POSTERS SESSION (with coffee break)**
Lobby of Big Conference hall of Buryat State University

18.00 **Demonstration of film about Aral Sea by Nikolai Aladin (Big Conference hall of Buryat State University)**

THURSDAY, AUGUST 24

BIG CONFERENCE HALL OF BURYAT STATE UNIVERSITY

PLENARY SESSION. *Chair:* Aharon Oren

9.00 **Michail Yakimov**
Institute for Coastal Marine Environment, IAMC-CNR, Italy
Primary production in oxic/anoxic interfaces of deep-sea hypersaline lakes: contribution of microbial dark CO_2 fixation in the Eastern Mediterranean Sea

9.30 **Zsofia Horvath**
Wasser Cluster Lunz, Austria
Biodiversity of zooplankton in European soda pans

10.00 Coffee break

REGULAR SESSION
Services provided by salt lakes: from chemical resources to cultural and social services
Chairs: Tianlong Deng, Nikolai Shadrin

10.30 **Aharon Oren**
Department of Plant and Environmental Sciences, The Institute of Life Sciences, The Hebrew University of Jerusalem, Israel
From Lake Baikal to the Dead Sea: the life and works of Moshe Novomeysky

10.50 **Tianlong Deng**
Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China
Exploitation and utilization of salt lakes recourses in China

11.10 **Jianfeng Song*, Tao He**
Shanghai Advanced Research Institute, Chinese Academy of Sciences, China
University of Chinese Academy of Sciences, Beijing, China
Extraction of lithium from salt lake brine of high Mg/Li using $Na[FeCl_4*2TBP]$ as extractant: thermodynamics, kinetics and processes

11.30 **Katia Hueso***
IPAISAL Apartado de Correos 50 28450 Collado Mediano, Spain
In sale salus: health provision from salt and saline wetlands

11.50 **Long Li***
Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China
Thermodynamic properties of lithium borates and their aqueous solution systems

12.10 **Kirill Kutsanov**
The State scientific and production Centre for fisheries «Gosrybcenter»,Russia
Experimental study of increasing the bioproductivity of salt lakes by introduction of *Artemia nauplii*

12.30 Lunch

REGULAR SESSION
Biochemical aspects of saline lake studies
Chairs: Oleg Kotsyurbenko, Natalia Belkova

14.00 **Ilya Kublanov**
Winogradsky Institute of Microbiology, Research Centre of Biotechnology, Russian Academy of Sciences, Russia
Polysaccharidolytic haloarchaea: underestimated diversity and exceptional sets of genes, encoding sugars-processing enzymes

14.20 **Anna Popinako***
Bach Institute of Biochemistry, Research Center of Biotechnology of the Russian Academy of Sciences, Russia
Structural adaptations of octaheme nitrite reductases from haloalkaliphilic *Thioalkalivibrio* bacteria to alkaline pH and high salinity

14.40 **Kseniya Vereshchagina***
Institute of Biology at Irkutsk State University, Russia
Salinity modulates thermotolerance, energy metabolism and stress response in amphipods *Gammarus lacustris*

15.00 **Ekaterina Bezsudnova**
Bach Institute of Biochemistry, Research Centre of Biotechnology of the Russian Academy of Sciences, Russia
Polyextremophilic enzymes from archaea and bacteria: structural and functional features

15.20 **Vera Tereshina**
Federal Research Centre «Fundamentals of Biotechnology» RAS, Russia
Organic osmolytes in adaptation of alkaliphilic and alkalitolerant fungi to the ambient pH

15.40 **Elena Erdyneeva***
Institute of General and Experimental Biology SB RAS, Russia
Proteolytic activity of galaoalkalophilic bacteria of the genus of *Proteinivorax* from sodium lake Tanatar (Russia)

16.00 Coffee break

16.30 **Presentation of Chinese Journal of Oceanology and Limnology**
(Roger Yu, Ian Jenkinson, Chen Yang)
General meeting of the International Society for Salt Lake Research
(all conference participants)
Awards for Young Scientists

18.00 Transfer to restaurant
19.00 Conference Dinner

THURSDAY, AUGUST 24

SMALL CONFERENCE HALL OF BURYAT STATE UNIVERSITY

REGULAR SESSION. Salt lake–landscape interactions, watershed studies
Chairs: Fanjing Kong, Oleg Anenkhonov

10.30 **Fanjing Kong**
MLR Key laboratory of Saline Lake Resources and Environment, Institute of Mineral Resources, Chinese Academy of Geological Science(CAGS), China
Botanic distribution characterization in the playa of Qaidam Basin, Tibetan Plateau

10.50 **Oxana Vishnyakova**
Institute of General and Experimental Biology SB RAS, Russia
Elemental composition and salt-accumulating activity of halophytes in the coastal zone of salt lakes

11.10 **Vasily Ubugunov**
Institute of General and Experimental Biology, Russia
Soils of the lakeside halomorphic ecosystems of the Barguzin Hollow

11.30 **Nikolai Khitrov**
Dokuchaev Soil Science Institute, Russia
Transformation of rectorite from alluvium at the Barguzin Depression in dark-humus quasi-gleyic saline cryoturbated soil

11.50 **Sofia Bondarenko**
Lomonosov Moscow State University, Russia
Obligate alkaliphilic fungi inhabiting the littoral zone of hypersaline lakes

12.30 Lunch

REGULAR SESSION
Paleolimnology: environmental change recorded by salt lake sediments
Chairs: Denis Rogozin, Yuecong Li

14.00 **Galina Bolobanshchikova***
Institute of Biophysics SB RAS, Russia
Diatoms in bottom sediments of closed-basin lakes of Khakasia

14.20 **Yuyang Geng***
Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, University of Chinese Academy of Science, China
Halite crust microrelief reconfiguration and electromagnetic scattering analysis in Lop Nur

14.40 **Denis Rogozin**
Institute of Biophysics SB RAS, Siberian Federal University, Russia
Impact of water level fluctuations on stratification of Lake Shira (Khakasia, South Siberia):from modern observations to paleoreconstruction

15.00 **Yun Shao**
Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, China
Polarimetric sar for subsurface lacustrine deposits detection and the evolution of Lop Nur

15.20 **Vladimir Zykov**
Institute of biophysics SB RAS, Russia
Fossil organic biomarkers of the bottom sediments of Lake Ercheck (Eastern Turkey)

15.40 **Yuecong Li**
College of Resource and Environmental Sciences, Hebei Normal University, China
Environmental change since 5000 cal. aBP in the southern of Inner Mongolica Plateau based on the palynological and geochemical record in the Anguli-Nuur Lake

16.00 Coffee break

16.30 **Presentation of Chinese Journal of Oceanology and Limnology**
(Roger Yu, Ian Jenkinson, Chen Yang)
General meeting of the International Society for Salt Lake Research
(all conference participants)
Awards for Young Scientists

18.00 Transfer to restaurant
19.00 Conference Dinner

THURSDAY, AUGUST 24

BURYAT SCIENTIFIC CENTRE, HALL OF INSTITUTE OF GENERAL AND EXPERIMENTAL BIOLOGY SB RAS, SAKHYANOVOI STREET, 6

14.00 – 16.00 **Round table discussion**

THE SALINE SOILS: GENESIS, EVOLUTION, CLASSIFICATION AND CONCEPTUAL AND METHODICAL APPROACHES OF THEIR STUDYING IN THE 21ST CENTURY

Coordinators: N.B. Khitrov (Dokuchaev Soil Science Institute, Moscow),
M. G. Merkusheva (Institute of General and Experimental Biology, Ulan-Ude)

FRIDAY, AUGUST 25

BIG CONFERENCE HALL OF BURYAT STATE UNIVERSITY

REGULAR SESSION
Salt lake ecology and biology, food webs and biogeochemical cycling
Chairs: Egor Zadereev, Brian Timms

9.00 **Egor Zadereev**
Institute of Biophysics SB RAS, Russia
Biological and ecological features of meromictic lakes

9.20 **Yuri Barkhatov**
Institute of Biophysics SB RAS, Russia
Vertical distribution and trophic role of *Cryptophyta* flagellates of meromictic lakes Shira and Shunet (Khakassia, Russia)

9.40 **Peter Hudson**
South Australian Museum, North Terrace, Adelaide, Australia
Using barcoding for an initial assessment of diversity within two ubiquitous, undescribed terrestrial invertebrate groups from Australian salt lakes

10.00 **Brian Timms**
Centre for Ecosystem Science, School of Biological, Earth and Environmental Science, University of New South Wales, Australia
On the influence of season and salinity on the phenology of invertebrates in Australian saline lakes, with special reference to those of the Paroo in the semiarid inland

10.20 Coffee break

10.50 **Elena Krasnova**
Lomonosov Moscow State University, Russia
Salt stratified lakes naturally separated from the White Sea shore: hydrological structure and multiple colored layers in the chemocline

11.10 **Tumenjargal Davaasuren**
National University of Mongolia, Mongolia
Microbial pollution of the Mongolian aquatic ecosystem

11.30 **Anton Drobotov**
Institute of Biophysics SB RAS, Russia
Taxonomic composition and biomass of zoobenthos in saline Lake Shira: shifts that happened in 65 year

11.50 **Natalia Tashlykova**
Institute of Natural Resources, Ecology and Cryology SB RAS, Russia
Long-term changes of the salt lakes ecosystem in South East Zabaikalie

12.10 **Andrey Plotnikov**
Institute for Cellular and Intracellular Symbiosis Ural Branch of RAS, Orenburg State Medical University, Russia
Phylogenetic structure and diversity of protistan communities in saline and brackish water bodies of the South Urals (Russia)

12.30 Lunch

REGULAR SESSION
Comparative studies of saline and freshwater lakes
Chairs: Emil Boros, Allan Chivas

14.00 **Emil Boros**
MTA Centre for Ecological Research, Balaton Limnological Institute, Hungary
Definition review of soda lakes and pans by assessment of large scale chemical data series in Eurasia

14.20 **Allan Chivas**
GeoQuEST Research Centre, School of Earth & Environmental Sciences, University of Wollongong, Australia
Organic chemistry of charophytes from freshwater and saline lakes

14.40 **Svetlana Ulanova**
The Institute of Complex Research of Arid Areas, Homutnikova, 111, Elista, Russia
Ecological passportization of artificial water resources of Kalmykia

15.00 **Natalia Belkova**
Limnological Institute SB RAS, Russia
Scientific Centre for Family Health and Human Reproduction Problems, Irkutsk, Russia
Structure alterations of bacterial communities in soda and freshwater reservoirs

15.20 Closing ceremony

POSTER SESSION

TUESDAY, AUGUST 22

16.20-18.00, LOBBY OF BIG CONFERENCE HALL OF BURYAT STATE UNIVERSITY

P1	**Roger Yu, Ian Jenkinson, Chen Yang** *Chinese Journal of Oceanology and Limnology* **Introduction to Chinese Journal of Oceanology and Limnology**
P2	**Tuyana Ayushina** *Institute of General and Experimental Biology SB RAS, Russia* **Spatial differentiation of saline soils in lakeside depressions of the steppe zone**
P3	**Olga Dagurova** *Institute of General and Experimental Biology SB RAS, Russia* **Microbial community composition of Lake Baikal coastal water**
P4	**Lubov' Vesnina** *Altai Branch of FSBI "Gosrybcenter", Russia* **Epizootic condition of opisthorchid flukes metacercariae contamination in cyprinid fish in the transient region of the Novosibirsk water reservoir and the Upper Ob**
P5	**Galina Podlesnaya*** *Limnological Institute SB RAS, Russia* **Detection of strains involved in nitrogen cycle in the cultivated microbial community of Lake Baikal biofilms**
P6	**Bayarma Tsydenova*** *Institute of General and Experimental Biology SB RAS, Russia* **Distribution of abundance and diversity of bacteria in freshwater Gusinoye Lake (Buryatia, Russia)**
P7	**Denis Rogozin** *Institute of biophysics SB RAS, Russia* **One-dimensional model of vertical structure of saline lake Uchum (Khakasia, South Siberia)**
P8	**Jiayin Hu** *College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China* **Solid-liquid phase equilibrium for the quaternary system (LiCl + NaCl + $CaCl_2$ + H_2O) at T = 288.15 and 308.15 K**
P9	**Natalia Tereshchenko** *A. O. Kovalevsky Institute of Marine Biological Research of RAS, Russia* **The man-made plutonium radioisotopes in the salt lakes of the Crimean Peninsula**
P10	**Qian Wu** *MLR Key Laboratory of Saline Lake Resources and Environments, Institute of Mineral Resources, Chinese Academy of Geological Sciences, China* **Experimental study and theoretical prediction of phase equilibrium of lithium–containing system**
P11	**Elena Abidueva** *Institute of General and Experimental Biology SB RAS, Russia* **Microbial community of the brackish Lake Beloe (Transbaikal Region)**
P12	**Alla Bryanskaya** *Federal Research Centre "Institute of Cytology and Genetics of the Siberian Branch of the RAS", Russia* **A metagenomics study of benthic microbial communities of saline lakes of the Novosibirsk Oblast**

P13	**Valentina Budagaeva*** *Institute of General and Experimental Biology SB RAS, Russia* **Mineral formation in thermal alkaline springs of Baikal region**
P14	**Ekaterina Burganskaya** *Federal Research Center of Biotechnology RAS, Russia* **Phototrophic bacteria in microbial mats of mineralized Kiran Lake (Siberia)**
P15	**Chenghang Sun** *Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences & Peking Union Medical College, China* **Biodiversity, novelty and antimicrobial activity of culturable actinobacteria isolated from Jiuliancheng Nur in Hebei Province, China**
P16	**Vyacheslav Dambaev** *Institute of General and Experimental Biology SB RAS, Russia* **Microbiological and physic-chemical characteristics of saline soils of fault zones of the Barguzin Basin**
P17	**Elena Erdyneeva*** *Institute of General and Experimental Biology SB RAS, Russia* **The proteolytic activity of the alkalophilic strain *Halomonas mongoliensis* isolated from the saline lakes of the Badain Jaran Desert (Inner Mongolia, China)**
P18	**Oleg Kotsyurbenko** *Moscow State University, Yugra State University, Russia; Genexplain GmbH, Germany* **Microbial diversity of the soda-salt lakes located in the Badain Jaran Desert**
P19	**Elena Lavrentyeva** *Institute of General and Experimental Biology SB RAS, Russia* **Identification of peptidases in the genome of alkaliphilic and halotolerant bacterium *Pelagirhabdus* sp. A11 by the bioinformatics analysis**
P20	**Aryuna Radnagurueva*** *Institute of General and Experimental Biology SB RAS, Russia* **Bacterial diversity in salt Lake Khilganta, Transbaikalia, Russia**
P21	**Dulma Tsyrenova*** *Institute of General and Experimental Biology SB RAS, Russia* **Cyanobacteria of soda-saline and fresh lakes of Transbaikal region (Republic of Buryatia, Russia)**
P22	**Elena Anufriieva*** *A.O. Kovalevsky Institute of Marine Biological Research RAS, Russia* **Abundance and the ecological role of *Eucypris mareotica* (Crustacea, Ostracoda) in the Crimean hypersaline lakes**
P23	**Veronika Dashkova*** *National Laboratory Astana, Nazarbayev University, Kazakhstan* **Assessment of phytoplankton community structure of Lake Balkhash using a FlowCam imaging flow cytometer**
P24	**Natalia Dergousova** *Bach Institute of Biochemistry, Federal Research Centre "Fundamentals of Biotechnology" RAS, Russia* **Production and preliminary characterization of a recombinant cytochrome c from *Thioalkalivibrio paradoxus***
P25	**Marina Georgieva** *Lomonosov Moscow State University, Gause Institute of New Antibiotics, Federal State Budgetary Scientific Institution, Russia* **On the ecology and physiology of facultative alkaliphilic ascomycete *Emericellopsis alkaline***

P26	**Olga Grum-Grzhimaylo** *White Sea Biological Station, Faculty of Biology, Lomonosov Moscow State University, Russia* **Mosaic structure of fungal community in the Kislo-Sladkoe Lake detaching from the Kandalaksha Bay of White Sea**
P27	**Dmitry Malashenkov** *National Laboratory Astana, Nazarbayev University, Kazakhstan* **Spatial heterogeneity of phytoplankton composition and water quality in Lake Balkhash**
P28	**Natalia Mirzoyeva** *A.O. Kovalevsky Institute of Marine Biological Research RAS, Russia* **^{90}Sr and ^{137}Cs as the radiotracers for determination of the rate of biogeochemical processes in salt lakes of the Crimea**
P29	**Nikolai Shadrin** *A.O. Kovalevsky Institute of Marine Biological Research RAS, Russia* **Green algae floating Cladophora mats in the saline lakes as an ecosystem architect: the Crimean case**
P30	**Tamara Tikhonova** *Federal Research Centre "Fundamentals of Biotechnology" RAS, Russia* **Genomics and transcryptomics of haloalkaliphilic sulfur-oxidizing bacterium *Thioalkalivibrio nitratireducens***
P31	**Vyacheslav Dambaev** *Institute of General and Experimental Biology SB RAS, Russia* **The physic-chemical characteristics and the number of microorganisms of permafrost soil katens of Yeravninsky Basin of Transbaikalia**
P32	**Norovsuren Zhadambaa** *Institute of General and Experimental Biology MAS, Mongolia* **Actinomycetes in soils of Mongolia and Buryatia**
P33	**Sosorbaram Pagamdulam*** *Institute of General and Experimental Biology MAS, Mongolia* **The effect of aridity on the swampy vegetation (in case Ugii Lake and Khugshin Orkhon River)**
P34	**Xia Chen** *College of Chemical Engineering and Materials, Tianjin University of Science & Technology, China* **The utilization of sludge salts of the wastewater resource by MVR**
P35	**Shiqiang Wang** *College of Chemical Engineering and Material Science, Tianjin Key Laboratory of Marine Resources and Chemistry, China* **Solid-liquid phase equilibrium in the quaternary system Li+, K+, Mg2+//$B_4O_7^{2-}$-H_2O) at 298.15 K**
P36	**Bayarma Tsybikdorzhieva** *Autonomous Non-profit Organization Buryat Center for Support of Innovation, Environmental Protection and Cultural Development "Demzheg", Russia* **Chemical resources of saline Lake Kiran for provision of medical services (Buryatia, Eastern Siberia)**
P37	**Yanfei Wang** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology. China* **Industrial crystallization of lithium carbonate**

P38	**Jiangjiang Yu** *MLR Key Laboratory of Saline Lake Resources and Environments, Institute of Mineral Resources, CAGS, China* **Extracting lithium from Tibetan Dangxiong Tso salt lake of carbonate type by using geothermal salinity-gradient solar pond**
P39	**Xiaoping Yu** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China* *College of Chemistry and Materials Science, Northwest University, China* **Recovery of lithium from brine by continuous centrifugal extraction**
P40	**Svetlana Zaitseva** *Institute of General and Experimental Biology SB RAS, Russia* **The electrogenic potential of the microbial mat of soda lake Verkhneye Beloe**
P41	**Andrey Plotnikov** *Institute for Cellular and Intracellular Symbiosis UB RAS, Russia* *Orenburg State Medical Academy, Russia* **Features of the benthic communities of lothic ecosystems in the basin of hypersaline Elton Lake**
P42	**Weigang Kong** *MLR Key Laboratory of Saline Lake Resources and Environments, Institute of Mineral Resources, CAGS, China* **Overview of salt lake stations on Tibetan Plateau**
P43	**Xuekui Wang** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Sciences and Engineering, China* **Multi-usage of eatable salts**
P44	**Elena Selivanova** *Institute for Cellular and Intracellular Symbiosis Ural Branch of RAS, Russia* **Diversity and carotenogenic capacity of new microalgae strains from the genus *Dunaliella* (Chlorophyceae)**
P45	**Savely Buryukhaev** *Institute and General and Experimental Biology SB RAS, Russia* **Ecological conditions and activity of microbial community in mineralized lakes of South-Eastern Transbaikalia**
P46	**Yafei Guo** *College of Chemical Engineering and Materials Science, Tianjin Key Laboratory of Marine Resources and Chemistry, Tianjin University of Science and Technology, China* **Apparent molar volumes of $Li_2B_4O_7$ aqueous solutions at temperatures from 283.15 to 363.15 K at 0.1 MPA**
P47	**Lianying Lei*** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China* **Solid-liquid phase equilibria for the aqueous quaternary system (Na^+, Ca^{2+}//Cl^-, borate – H_2O) at 288.15 K**
P48	**Huan Wang** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China* **Phase equilibria of the ternary system ($MgSO_4 + Mg_2B_6O_{11} + H_2O$) at 288.15, 298.15 and 308.15 K**

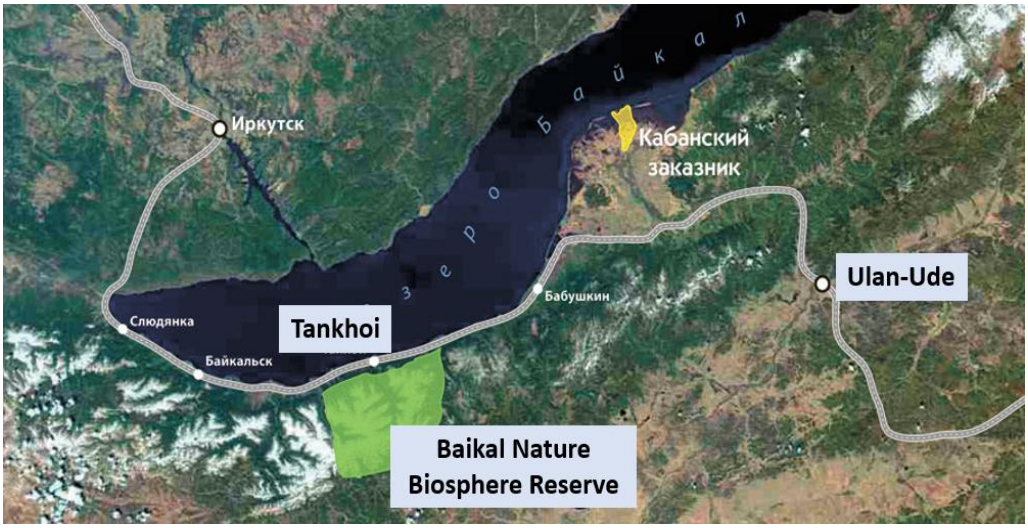
P49	**Ying Liao** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science and Technology, China* **Phase equilibria and physicochemical properties of the aqueous ternary system ($NaCl + NaClO_3 + H_2O$) at 293.15 K**
P50	**Xiaolong Gu** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Sciences and Engineering, China* **Thermodynamic representation of the properties and phase equilibria for the brine of calcium chloride subtype salt lake**
P51	**Jing-jing Tang** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Sciences and Engineering, China* **Thermodynamic representation of the properties and phase equilibria for the brine of magnesium sulfate subtype salt lakes**
P52	**Ya-ping Dai** *Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Sciences and Engineering, China* **Thermodynamic representation of the properties and phase equilibria for the brine of chloride-type salt lake**
P53	**Zhen-qian Wang** *College of Marine and Environmental Sciences, Tianjin University of Science & Technology, China* **Microbial diversity and pigment accumulation of halophilic archaea *Haloferax* under open culture conditions**
P54	**Shanyue Wang** *College of Marine and Environmental Sciences, Tianjin University of Science and Technology, China* **Supplementation of halophilic archaea improves *Artemia* biomass production in hypersaline culture conditions**
P55	**Long Li *** *College of Chemical Engineering and Materials Science, Tianjin Key Laboratory of Marine Resources and Chemistry, Tianjin University of Science and Technology, China* **Heap capacity of $Li_2B_4O_7$ solutions at 298.15 K and 0.1 MPA**
P56	**Wanjing Cui** *College of Chemical Engineering and Materials Science, Tianjin Key Laboratory of Marine Resources and Chemistry, Tianjin University of Science and Technology, China* **Apparent molar volumes and the pitzer parameters of ($Mg_2B_4O_7 + H_2O$) system**
P57	**Kaiyu Zhao** *College of Chemical Engineering and Materials Science, Tianjin Key Laboratory of Marine Resources and Chemistry, Tianjin University of Science and Technology, China* **Apparent molar volumes of LiB_5O_8 aqueous solutions at temperatures from 283.15 to 363.15 K at 0.1 MPA**

* - here and above, young scientists eligible for award for the best oral or poster talk

MID-CONFERENCE TOUR
TOUR TO THE BAIKALSKY STATE NATURE BIOSPHERE RESERVE
(August 23, 2017)

The Baikalsky State Nature Biosphere Reserve covers the central part of the Khamar-Daban range. The total area is 167871 ha, the borderline length is 200 km.

The central manor of the Reserve is in Tankhoy village. The village is on the southern shore of lake Baikal. The distance from Ulan-Ude by the highway is 234 km. On the opposite shore of the lake, in the outflow of River Angara, Listvyanka village and port Baikal are situated.



There are 242 species of birds and 51 species of mammals in the Reserve. 1036 species of higher plants, more than 700 species of lichens, more than 200 species of fungi grows here. There are wild mountain forests in the Reserve that have never been felled or burned. For more information, visit the website of The Baikalsky State Nature Biosphere Reserve www.baikal-zapovednik.ru

Additional information

Visitor center of the Baikal reserve **"Baikal Zapovednyi"** was opened in 2016. Interactive informative-educational expositions work here. The exposition "People on lake Baikal" present the history of the settlement and activities of the people in the region, from the beginning of the settlement 25000 years ago to XXI century. Another exposition is dedicated to the object of historical and cultural legacy – Baikal railway ferry crossing. Several stands are dedicated to anti-poaching operations, Baikal study, history of reserve management and studies in Russia and region (including the lake pollution problems, etc).

In 2010 Baikal Reserve became a model territory for the educational tourism. The Reserve has a lot of year-round educational tours and excursion programs for everybody: from programs for children and people with special needs, to active tours to mountain lakes and waterfalls. There are 20 ecological trails with total length about 100 km. We are going to visit **"Cedar alley"** on the ecological trail "In the wilds of Khamar-Daban". Excursion will begin at the Central manor and continue through the preserved area, including cedar forest and raided moss. From the trail you will have a dazzling view of the spurs of Khamar-Daban. The trail's length is 2.5 km.

“BARGUZIN VALLEY” TOUR
(August 26-29, 2017)

Barguzin Valley is one of the biggest and loveliest valleys in Buryatia. It’s name derive from the tribe of Barguts, who lived there in the beginning of the II millennium B.C. Valley is notable for its length (230 km) and beauty of landscape. Barguzin River flows through the valley, which is enclosed by Barguzin and Ikat ranges from two sides. Part of its territory belongs to Jerginsky and Ulyunsky reserves. There are rich nature and interesting historical and cultural landmarks in the Barguzin valley. The regional center – Barguzin village – is included in the list of historical cities and settlements of Russia.

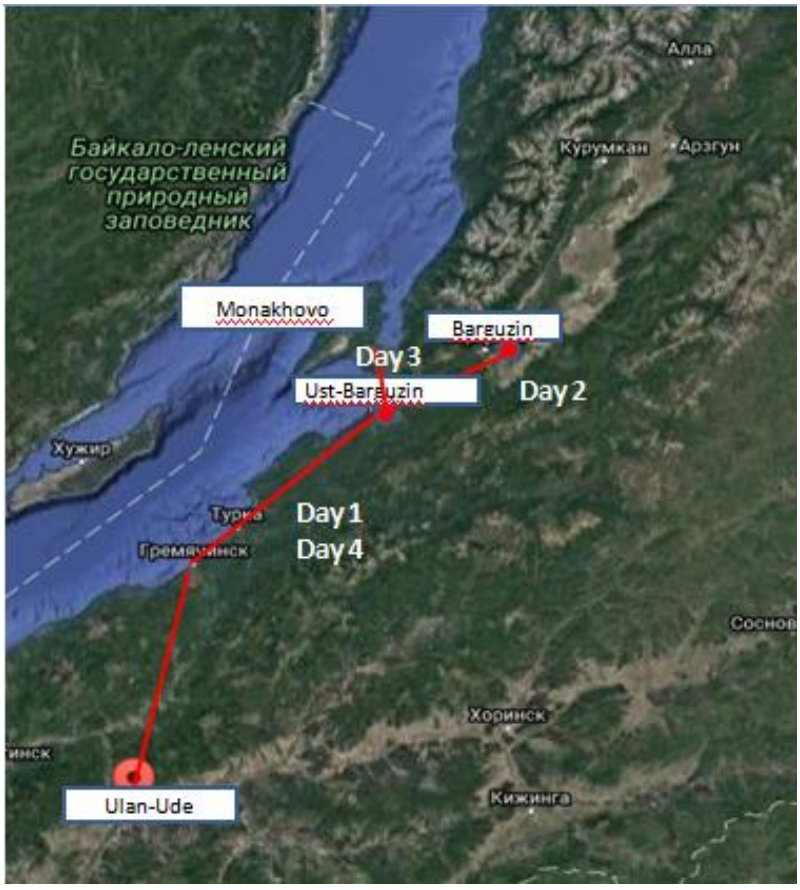
You can see here: https://www.youtube.com/watch?v=tNp9eb7nk6s

Day 1 (August 26) – Transfer from Ulan-Ude to Ust-Barguzin. The distance is 266 km. Visit of the Turtle Rock, sightseeing point on the Barguzin Bay of the Lake Baikal, hotel accommodation (http://bargudzintokum.jimdo.com).

Day 2 (August 27) – Travel tour to the Barguzin Valley: Ust-Barguzin – Barguzin – Suvo – Ust-Barguzin (100 km). Arrival in Suvo. Excursions: self-revealed image of goddess Yanzhima, Ininsky garden of stones, stone-bull “Bukhe-Shulun” – a sacred stone of the Barguzin Valley, Suvinsky castle rock. Visit of Alga Salt Lakes (pH 9.6, salinity 40-50 g/L). Return to Ust-Barguzin.

Day 3 (August 28) – Excursion to Chivyrkuisky Bay of the Lake Baikal. Transfer to Monakhovo Village. Boat trip to a thermal spring of the Zmeevaya Bay. Return to Monakhovo. Lunch. Travel tour to the Zabaikalsky National Park. Visit of the salt lake Bormashevoye. Stop at the sightseeing point near the settlement of Monakhovo in the Chivyrkuisky Bay. Transfer to Ust-Barguzin.

Day 4 (August 29) – Transfer from Ust-Barguzin to Ulan-Ude (266 km).



Additional information

Pyhta Pass

The road from Ulan-Ude crosses Pyhta Pass (Ulan-Burgassy-Ridge). Drivers call it “difficult” and “steep”. There is a holy site – oboo – on the pass. Travelers stop to pay homage to spirits of the place by leaving coins and food.

Turtle Rock

Turka (translated from Evenki, means “omul”) village is situated in the creek of Turka River. First settlers appeared by the side of the river in the first half of XVIII century. Nowadays the river is used for rafting and fishing trips.

On the northern edge of Turka Village, several meters from the shore, lays the Turtle Rock – natural landmark in the shape of a turtle. The Lion Rock is situated close by. http://nature.baikal.ru/phs/ph.shtml?id=30816&pg=hot

Image of goddess Yanzhima

At the bottom of the Uulzaha Mountain (Barguzin Ridge) lays Buddhist site – stone with bright orange and hoary washings that feature the self-revealed image of goddess Yanzhima. The image is easy to see during the sunset. Yanzhima is a Buddhist goddess of family and art. Actors, musicians, poets and artists worship Yanzhima, and childless women often ask her for help.
http://www.visitburyatia.ru/places/section-15/item-279948/

Ininsky garden of stones

In the southwest part of the Barguzin Valley, where Ina River flows out of the Ikat Ridge, the famous Ininsky Garden of stones is situated. To the right and left of the river on the level terrain large rocks rise above the ground. They occupy an area of 10 square km. The appearance of the round stones (some of them are as far as 4 m in diameter) is associated with the landslide that turned the riverhead into a big lake.
http://pribaikal.com/suvinskaya-saksoniya.html

Suvinsky castle rock

On the bottom of the Ikat Ridge, to the east of Suvo village, stands Suvinsky Castle Rock (Suvinsky Saxony). It is a group of rocks that resembles a castle with the high towers. Its length is 300-400 m, height – 40-50m. These places were sacred and revered by Evenki shamans. In Evenki language “suvoya” or “suvo” means “whirlwind”. It was believed that spirits of wind, the foremost of which was legendary Baikal wind “Barguzin”, lived here. http://pribaikal.com/suvinskaya-saksoniya.html

Bukhe-Shulun

On the road from Suvo village lays the relic of Barguzin Valley – the Burhe-Shulun Rock (“Bull-rock”), whose spirit is believed to be the master of the whole valley. Locals worship the stone, as it is held to contain the material and infinite spiritual power that guards all residents of the valley.
http://pribaikal.com/suvinskaya-saksoniya.html

Alga Salt Lakes

The site of Alga Salt Lakes is the eponymous depression of the Neogene age. Larger Alga Lake is situated 3 km north of Alga village, near the east flank of Kladovaya mountain. Its area size is 108.4 hectare, depth – 1.5 m. During the summer its temperature is about 21°C, pH 9.6, the water is sodium sulfate-bicarbonate. Mineralization is 45-40 g/l. In its southeast part the lake is connected with Lesser Alga Lake. Lake's shores are open. South westerly the lake sides with swamps, where several springs have their source. These springs keep the steady inflow of water to the lake.

The area of Lasser Alga Lake is 2.9 hectares, its water is sodium sulfate. Its hydrological regime is unstable: the lake usually dries up during the torrid seasons, two lagoons that remain in the southern part of the lake are filled with high-mineralized bittern. The bottom of drying part of the lake is usually covered with a layer of unconsolidated mirabilite that becomes dehydrated and then is blown away by the wind.

Zabaykalsky National Park
Barguzin sable

Zabaykalsky National Park covers the middle section of the eastern shore of Lake Baikal, the west slope of the Barguzin mountains to the east, the Ushkany Islands, and the only large peninsula on the lake – Svyatoy Nos. Through the territory of the park, from north-east to south-west lie Barguzin range and Sredinny range of Svyatoy Nos peninsula. Chivyrkuisky isthmus connects Svyatoy Nos with the eastern shore of Lake Baikal.
More information and photos http://zapovednoe-podlemorye.ru/

Lake Bormashevoye

On the Chivyrkuisky isthmus, 4 km from Ust-Barguzin, lies brakish lake Bormashevoye. It's maximum depth is 3 m.

Chivyrkuisky Bay

The area size of Chivyrkuisky Bay is about 270 square km. The bay is relatively shallow, its water temperature touches on 22-24єC. It is the most far-reaching bay of the Lake Baikal and also one of the most beautiful.

Zmeevaya Bay

Zmeevaya Bay is well-known for its sulphurous hot springs. Their temperature is about 40-45°C.

TRANS-BAIKAL TOUR
(August 26-30, 2017)

The main route will pass through the inland part of Eurasia, from Ulan-Ude to Chita and to the south of the Trans-Baikal Region (State Nature Biosphere Reserve "Daursky"). The route length is about 1700 km. The route will pass through the south-eastern part of the Trans-Baikal Region, where there are about 300 soda and salt lakes.

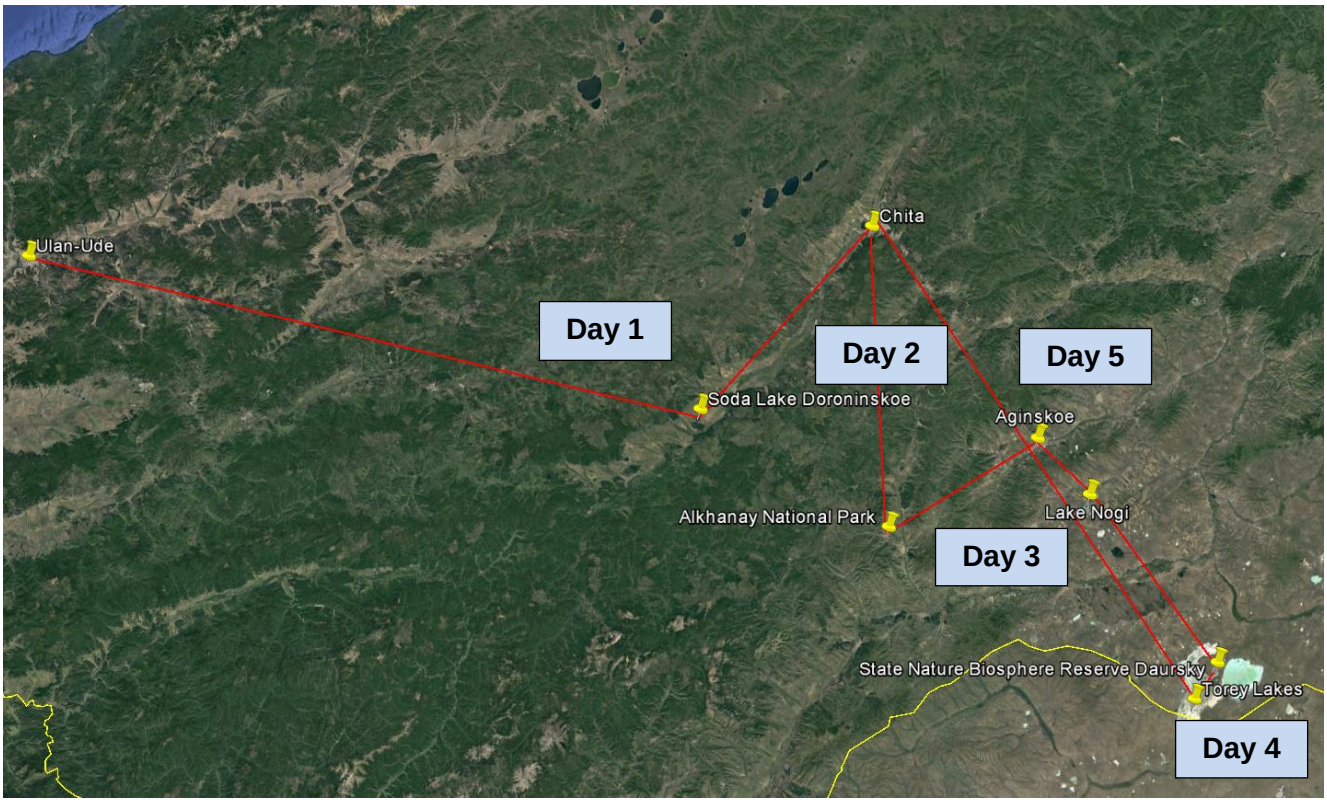
Day 1 (August 26) – Transfer Ulan-Ude – Chita (the distance is 658 km). On the way, a visit to Lake Doroninskoe, one of the three known meromictic lakes in Siberia (distance from Ulan-Ude to the lake is 500 km). Overnight stop in Chita (hotel).

Day 2 (August 27) – Transfer Chita – National Park "Alkhanai" (the distance is 210 km). Excursion around the territory of the National Park ("Gate Temple Route"). Overnight stop in national park "Alkhanai".

Day 3 (August 28) – Transfer National Park "Alkhanai" – village Aginskoye – State Nature Biosphere Reserve "Daursky" (the distance is 300 km). On the way, a visit to the historical attraction Aginsky lamaist temple, and to the soda lake Nozhiy (one of the largest and most interesting soda lakes in this steppe region). Accommodation and overnight stop in a tour center on the Torey lakes.

Day 4 (August 29) – Excursion to the largest lakes of Trans-Baikal: Torey lakes – Zun-Torey and Barun-Torey, and other nearby lakes of the Torey basin (the total route length is 200 km).

Day 5 (August 30) – Transfer "Daursky" Reserve – Chita (300 km). Departure by train to Ulan-Ude or overnight stop in Chita and departure from Chita airport.



Additional information

Lake Doroninskoe

Lake Doroninskoe – largest soda lake of Eastern Siberia, located 150 km to the southeast from city of Chita. Area – 4.8 kmI. Maximal depth – 6.5 m. The lake is endorheic; elevated salinity is due to evaporation. Water column is stratified with the water salinity equal to 22 g/l at the surface and to 39 g/l near the bottom. The commercial exploitation of sodium carbonate was started at the beginning of XX century and lasted for 50 years. Estimated yield is 15000 ton per year. The commercial exploitation was banned, as the lake is part of reserve territory.

City of Chita

Chita – city in the Eastern Siberia, administrative center of Zabaikalskii krai. The town was founded by Kazaks in 1653. Population — 343511 inhabitants (as of 2016). The city is located at the bank of river Chita, at its confluence in the river Ingoda. The climate is sharply continental. The leading industries are energy and food production. Transport hub on the Trans-Siberian Railway and federal highways. The historical centre retained a rectangular grid of streets, according to the draft of 1862. Among the monuments of the pre-revolutionary period: the "church of the Decembrists" of the late XVIII century, numerous stone and wooden houses of gold merchants of the early XX century.

Alhanay National Park

One of the newest national parks of Russia, **Alhanay National Park** is situated on the territory of Aginsky Buryat Autonomous District (Okrug). The central part of the Park is mountainous terrain covered with birch/larch and coniferous forests. The southern sections of the Park are located at lower altitudes and consist primarily of steppe ecosystems. The diversity of habitats and altitudinal zonation allow for the presence of trees that are normally rare in Southeast Transbaikalia such as Siberian pine (cedar pine, *Pinus sibirica*), *Pinus pumila* and Siberian spruce-tree (*Abies sibirica*). The cultural and religious aspects of the Park are equal in importance to the natural riches of Alhanay. The mountain is one of the most esteemed places among the local population and possesses many religious and historic locations connected to a history of the Buryat people. The territory encompassed by Alhanay Park is known for its perfect landscapes, the curative waters of its mountain creeks, and the trails used by religious pilgrims and travellers. The National Park was created for preserving valuable landscapes, natural monuments, monuments of history and culture, and flora and fauna (Magnificent Transbaikalia. Nature of the Transbaikalian Region. Project by Oleg Korsun. http://www.nature.chita.ru/Reserves/index.htm). Official web page of the park http://www.alkhana.ru/.

Aginskii Datsan

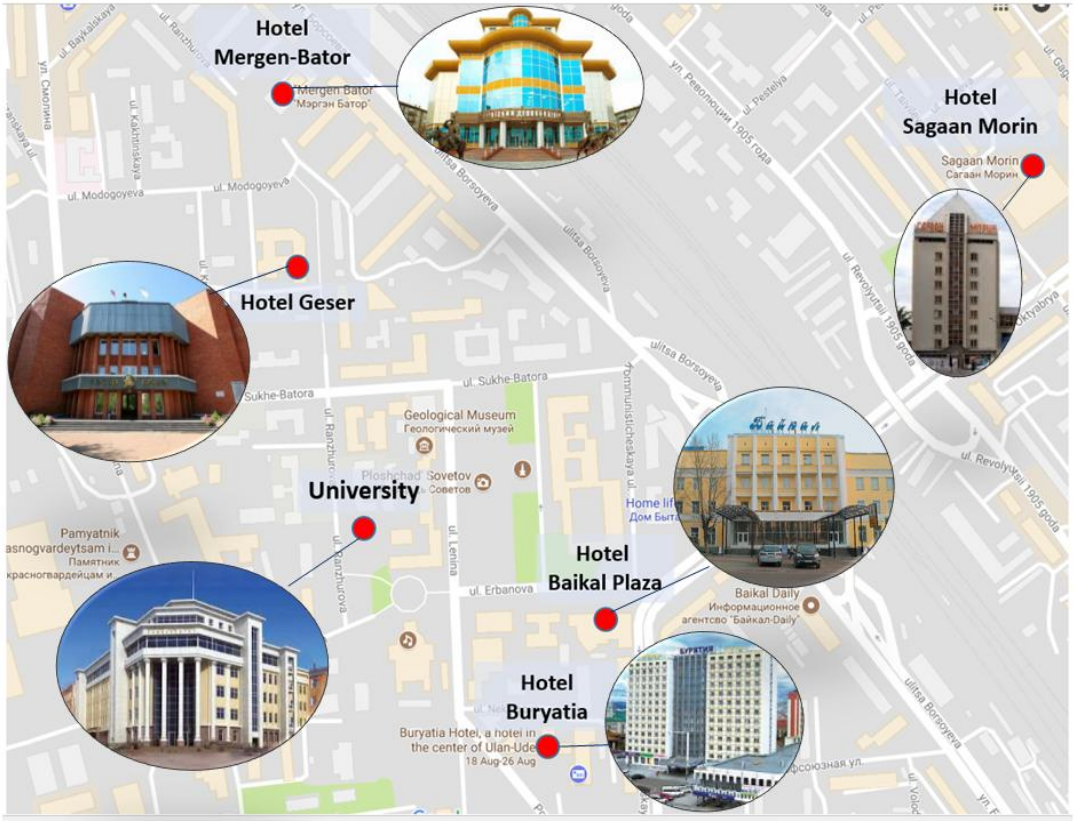
The Aginsk datsan was built in 1811. By the middle of the century it became one of the largest Buddhist universities in Transbaikalia. It taught the basics of Buddhism, Tibetan and Mongolian language, geography, medicine, astronomy, astrology, philosophy. Books on Buddhist philosophy, logic, medicine, astronomy, astrology, tantric treatises in Tibetan, Buryat and Mongolian languages were printed. The library of datsan and its printing shop had no equal in Transbaikalia. There were created 48000 woodcuts with texts, 592 boards with drawings and iconic images. The cathedral temple, dedicated to the Buddha Shakyamuni, has 3 floors, its construction went from 1875 to 1886. Construction of the stupa "Gendun Choyden" dates from 1926-1929. In 1933 the stupa was destroyed. In 2004-2005, the stupa was erected again. Official web page http://aginskydatsan.ru/. Photo from http://gdehorosho.ru/6232

Lake Nozhy

Lake Nozhy is a drainless salt lake, located 15 km south of the village Tsokto-Khangil of the Aginsky district. The area is 5.2 km^2, the depth is up to 10 meters. The shore of the lake is covered in many places with long and flat shards of slates. These are lying Kangil clays with bizarre forms of weathering in the form of pagodas, table mountains, erosion boilers, etc. Clay found lenses with numerous remains of the bones of the Mongolian toad, the remains of skeletons of fish, birds and mammals. Several complexes of archeological monuments are connected with the lake terraces, including cemeteries and sanctuaries (neolithic, bronze and iron epochs). Information and photo from the web page https://dom.sibmama.ru/ozero_nojii.htm

Daursky State Biosphere Reserve
Torey lakes

The **Daursky State Biosphere Reserve (Zapovednik)** is located in the southern part of the Chita Region. The territory of the Reserve consists mainly of steppe landscapes with many typical steppe species of plants and animals, and includes such rare species as the Zeren gazelle, Daurian hedgehog, manul wild cat and the Mongolian marmot (tarbagan). Major highlights of the Reserve are **the Torey Lakes** (Barun-Torey and Zun-Torey). They are largest lakes of Transbaikalia. A unique feature of these lakes is their periodic filling and drying, occurring on the average once every 30 years. Thus, the lakes were dried up four times in 20th century. The Torey Lakes form separate water basins, receiving water from small steppe rivers. Because of this, the lake waters contain a high concentration of dissolved salts. The Torey lakes attract many species of birds, which nest on their shorelines. In addition, the lakes are located on the major flyway for migrating species that nest north of the Daursky Reserve. The bird fauna in the Reserve is extremely rich (314 species). Three species of cranes, the Japanese White-naped, the Common and the Demoiselle crane nest in the territory of the Reserve. Two other species of crane, the Great White and the Hooded crane, utilize the Reserve as subadults. Official web page http://daurzapoved.com/



The map of the centre of Ulan-Ude

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