

8th International Conference on Salt Lakes

23-26 July 2002
Zhemchuzhny, Republic of Khakasia

Tuesday 23 July 2002

08:00-09:00 Registration

09:00- 10:30 OPENING CEREMONY (Conference Hall)

09:00-10:05 Welcoming addresses

*Prof. Andrey G. Degermendzhy, The Chairman of the
Scientific Organizing Committee*

*Alexei I. Lebed, The Head of the Government,
Republic of Khakasia*

*Anatoly A. Lepeshev, The Head of the Committee for
Science and Higher Education, Krasnoyarsk
krai Administration*

*Prof. Robert S. Jellison, Secretary of the International
Society for Salt Lake Research*

Anatoly P. Makarchuk, Head of Shira Region dministration

Conference Guests (2-3 minutes per presentation)

*Acknowledgements to Conference Sponsors
Kondrin V.K., FSE "Bereg"*

10:05-10:30 Press-conference

11:00-19:00 Lake tour

20:00 Welcome Party

Wednesday 24 July 2002

SESSION I

Geological history and paleoecology of salt lakes
Chairmen: Prof. Krivonogov S.K., Dr. Oberhänsli H.

9:00-9:20

Biogeochemistry of hydrocarbons in hypersaline lake Karachi
Kurakolova E.A., Burkova V.N., Vorobyeva N. S., Russia

9:20-9:40

**Holocene climatic variability and evolution of human settlement
in the Aral Sea Basin (CLIMAN)**

Oberhänsli H. (Germany), Wünnemann B. (Germany), Riedel F.
(Germany), Keyser D. (Germany); Hoelzmann P. (Germany), Heller
F. (Germany), Mackay A. (Switzerland), Aladin N.V. (UK),
Nourgaliev D.K. (Russia), Krivonogov S.K. (Russia), Baipakov
K.M. (Kazakhstan), Shirinov T.S. (Uzbekistan)

9:40-10:00

**Geological conditions of formation and ecological and
geochemical peculiarities of salt lakes in North Central Asia**

Taisaev T.T., Russia

10:00-10:20

Organic Substances in Khakasia Salt Lakes Sediments

Turov Yu.P., Gooznyaeva M.Yu., Russkikh I.V. and Kadichagov
P.B., Russia

10:20-10:40

Coffee-break

10:40-11:00

**Trophic ranging of reservoirs and water fitosystems on totality of
biogeochemical characteristics**

Khailov K.M., Yurchenko Yu.Yu., Ukraine

11:00-11:20

**Trends of climatic parameters in lake regions of the South of
Siberia (20th century)**

Vysotskaya G. S., Russia

11:20-11:55 Geological history and paleoecology of salt lakes

ORAL PRESENTATIONS OF POSTERS. SESSION I

Chairmen: Prof. Krivonogov S.K., Dr. Oberhänsli H.

**Carotenoids occurring in west siberia lacustrine sediments and in
East Siberia ancient rocks**

Burkova V.N., Kurakolova E.A., Russia

**Production and hydrochemical characteristics of salt lakes of
Odessa region**

Goncharov A.Yu., Yurchenko Yu.Yu., Ukraine

Geoinformational support of the CLIMAN project (Aral Sea)

Krivonogov S. K., Russia

**Usage of salty lake waters for producing biologically active
additions and mineral concentrates**

Burkova V.N., Boyev S.G., Russia

**Early diagenetic variations of lipid antioxidants in saline
environments**

Burkova V.N., Kurakolova E.A., Mozzhelina T.K., Nikolaeva T.L.,
Russia

**Caratinoid pigments in the sediments of salty lakes of West
Siberia and ancient rocks of East Siberia**

Burkova V.N., Kurakolova E.A., Russia

11:55-14:00

Poster viewing

14:00-15:00

Lunch

SESSION II

**Structural organization of salt lake biota,
genetic diversity, spatial heterogeneity, seasonal
variability**

Chairmen: Prof. Gulati R.D., Prof. Pechurkin N.S.

15:00-15:20

**Some features of algoflora of ultrahaline bay Kara-Bogas-Gol
(Turkmenistan)**

Bulatov S. A., Turkmenistan

15:20-15:40

**Zooplankton of brackish-water Karstic Lakes of Middle Volga
Region**

Derevenskaya O.Yu., Russia

15:40-16:00

**On the differences between trophic structure and foodweb in
fresh-water, brackish-water and saline-water ecosystems**

Gulati R.D., van Donk E., The Netherlands

16:00-16:20

**Biogeochemistry of sulfur and carbon cicle in Mogilnoye lake
(island Kildin, Russia)**

Ivanov M.V., Russia

16:20-16:40

Genetic diversity of halophilic organism in Chinese saline lakes

and the application prospect of gene engineering for plant salt tolerance

Kong F., Zheng M., Liu J., Tian X., China

16:40-17:00

Biota and Limnology of Inland Salt lakes of Western Australia under stress

John J., Australia

17:00-17:20

Coffee-break

17:20-17:40

Cohort analyses of *Artemia* populations in hypersaline Mono lake, California, USA

Jellison R., USA

17:40-18:00

The limnology of the saline lakes of the central and eastern inland of Australia: a review with special reference to their biogeographical affinities

Timms B.V., Australia

18:00-18:20

Spatial heterogeneity of hydrobionts' distribution in Chany lake

Kipriyanova L.M., Yermolaeva N.I., Mitrophanova E.Yu., Bezmaternykh D.M., Dvurechenskaya S.Ya., Popov P.A., Yakovchenko S.G., Russia

18:20-18:40

Microbial sulfate reduction in a brackish meromictic shira lake

Kosolapov D.B., Rogozin D.Yu., Gladchenko I.A., Zakcharova E.E., Kopylov A.I., Russia

18:40-19:00

Biota structure of salt lakes of Altai Region

Vesnina L.V., Russia

19:00-19:20

Hydrobiological characterisation of mineral lakes located in the south-eastern part of the Irkutsk region

Pen'kova O.G., Popovskaya G.I., Sheveleva N.G., Korovyakova I.V., Russia

Thursday 25 July 2002

SESSION II

Structural organization of salt lake biota, genetic diversity, spatial heterogeneity, seasonal variability

Chairmen: Academician Zavarzin G.A., Prof. Timms B.V.

9:00-9:20

Study Advances in Saline Lake Resources on the Tibet Plateau

Zheng M., China

9:20-9:40

Anaerobic chemotrophic communities in highly mineralized lakes

Zavarzin G. A., Russia

9:40-10:00

Seasonal biota variation of salt lakes of the South of West Siberia

Yasuchanya T. L., Russia

10:00-10:20

The new moderately haloalkaliphilic methanotrophs isolated from geographically distant soda lakes

Eshinimaev B.Ts., Khmelenina V.N., Trotsenko Yu.A., Russia

10:20-10:40

Coffee-break

10:40-12:30

Structural organization of salt lake biota, genetic diversity, spatial heterogeneity, seasonal variability

ORAL PRESENTATIONS OF POSTERS. SESSION II

Chairmen: Academician Zavarzin G.A., Prof. Timms B.V.

A note on the effects of an extreme and unexpected meteorological phenomenon on lake Alchichica

Alcocer J., Filonov A., Mexico

On the ecology of *Caecidotea williamsi* (Crustacea: Isopoda: Asellidae) from Alchichica saline lake, Central Mexico

Alcocer J., Escobar E., Mexico

The impact of hypersaline mine water discharge on ecosystem function in Kambalda region playas

Foster J., Fergusson B., Australia

Vertical structure and photosynthetic properties of phytoplankton in relation to *in situ* irradiance and temperature gradient in Shira lake measured by diuron-state and variable chlorophyll fluorescence

Gaevsky N.A., Gorbaneva T.B., Belonog N.P., Koltashev A.A., Russia

Primary production of halophilic cyanobacterial association of Sivash lagoons (Krym)

Gerasimenko L. M., Orleansky V. K., Russia

Experience of biological-hydrochemical zoning of semi-closed Sevastopol bay as a basis for varied approach to ecological monitoring of aquatic environment

Gevorgiz N., Lopukhin A.S., Ovsjany E., Romanov A., Osadchaya T., Ljashenko S., Lopukhin S., Kemp R.B.

Investigation of depth adaptation fotosyntetic pigments in phytoplankton of Shira Lake by epifluorescence method

Gorbanyova T. B., Russia

Tools for bioassessment of inland salt lakes in Western Australia

John J., Australia

Distribution and habitat conditions of the ciliate *Frontonia leucas* (Ciliophora, Hymenostomatida) from lake Shira

Khromechek Elena B., Barkhatov Yu.V., Musonova M.V., Russia

Some aspects of conservation and management of salt lakes of South of Siberia

Kirillov V.V., Russia

Bacteria and heterotrophic flagellates in the pelagic carbon cycle in stratified brackish Shira lake (Russia)

Kopylov A. I., Kosolapov D.B., Romanenko A.V., Degermendzhy N.N., Russia

The mongolian toad *Bufo raddei str.* in mineral lakes located on the western coast of lake Baikal

Litvinov N.I., Russia

Composition of fatty acids of *Gammarus lacustris* and its food sources from the salt lake Shira compared to those from a small freshwater Siberian reservoir

Makhutova O. N., Russia

Unique of structure of brackish-water lakes ecosystems of middle Volga region

Mingazova N.M., Derevenskaya O.Yu., Palagushkina O.V., Monasypov M.A., Sayfullin R.R., Unkovskaya E.N., Barieva F.F., Russia

Heuristic mathematical modeling for water ecosystem studies

Pechurkin N. S., Russia

The measure of kinetic characteristics of hydrobionts (*Gammarus lacustris*) of Shira and Bele lakes by electrode methods

Pechurkin N. S., Boyandin A. N., Somova L. A., Russia

Autotrophic picoplankton of Shira Lake

Romanenko A. V., Russia

The program shell of the informational - analytical system for the forecast of a state ecosystem and qualities of water in reservoirs

Turov V.V., Degermendzhy A.G., Gubanov V.G., Russia

The effect of environment factors on the vertical distribution of copepoda *Arctodiaptomus salinus* (from Shira lake) in laboratory conditions

Zadereev Ye.S., Gubanov M.V., Russia

The formation of the vertically stratified distribution of zooplankton in Shira lake

Zadereev Ye.S., Tolomeev A.P., Russia

Modeling of vertical distribution of phytoplankton in Shira lake

Zotina T.A., Degermendzhy A.G., Tolomeyev A. P., Gavrilova L.V., Russia

Some aspects of ecology and nutrition of amphipod *Gammarus lacustris* from Shira lake

Yemelyanova A.Yu., Russia

12:30-14:00

Poster viewing

14:00-15:00

Lunch

SESSION III

Functioning of salt lake ecosystems, trophic structure and interactions, biogeochemical interactions, movements of organisms

Chairmen: Prof. Degermendzhy Andrei G., Prof. Coleman M.

15:00-15:20

The Crimean Hypersaline Lakes: I. Bioenergetics of the Microbial Community and the Sedimentation-to-Mineralization Ratio

Mukhanov V.S. (Ukraine), Naidanova O.G. (Ukraine), Shadrin N.V. (Ukraine), Lopukhin A.S. (Ukraine) and Kemp R.B. (UK)

15:20-15:40

Biological mechanisms and a mathematical model of vertical structure of Shira lake ecosystem

Degermendzhy A.G., Russia

15:40-16:00

Salinity of water as a factor to determine the development of the shrimp *Artemia* in the lakes of South of Western Siberia

Litvinenko L.L., Kozlov A. V., Kobylina T.E. and Bauer D.S., Russia

16:00-16:20

Features of development of brine shrimp *Artemia* on the border of an area in lakes

Rostovcev A. A., Vizer L.S., Russia

16:20-16:40

Characterization of *Artemia* populations of Western Siberia lakes: morphometry and cytogenetics

Boyko E.G. (Russia), Saukova N.A. (Russia), Sorgeloos P. (Belgium)

16:40-17:00

Has *Artemia parthenogenetica* been introduced into Western Australia through human agency?

McMaster K., Savage A., Finston T., Johnson M.S. and Knott B., Australia

17:00-17:20

Coffee-break

17:20-17:40

The ecology and distribution of Samphires (Salicorniae) in the goldfields of Western Australia

Datson B.M., Australia

17:40-18:00

Modeling environmental processes in large saline wetlands in Western Australia

Coleman M. U., Australia

18:00-18:20

The effect of landuse on benthic microbial communities in salt lakes of the northern agricultural region, Western Australia

Smith D., Eliot I., Knott B., Australia

18:20-18:40

Halophilous microorganisms in water – settlements from salt dumps of potassium mines, subsurface waters and paleozoic marine lagoons

Oborin A. A., Ilarionov S.A., Seleznev I.A., Rubinstein L.M., Bulbovich A.R., Vetlugaev A.A., Russia

18:40-19:00

Water resources of the Republic of Khakasia: biological diversity, management, protection

Nedvetsky V.I., Tatarintsev V.I., Gilenberg V.I., Devyatkin G.V., Russia

19:00-19:20

Microbial processes of carbon and sulfur cycles in the salt lake Shira (Khakasia)

Pimenov N.V., Rusanov I.I., Karnachuk O.V., Brjanseva I.A., Rogosin D.Yu., Russia

Friday 26 July 2002

SESSION IV

Management of salt lakes for biotechnological and medical purposes

Chairmen: Prof. Dzhabarova N.K., Prof. Knott B.

9:00-9:20

The Monitoring of natural balneological resources of the Republic of Khakasia

Trojanov G.Yu., Russia

9:20-9:40

Application of peloids and dry brine with additional components in medicine

Tchistokhin Yu.G., Shelepanova O.A., Subbotin A.V., Pivovarov A.A., Russia

9:40-10:00

Thermohaline structure of salt lakes with "greenhouse" effect and possibility its use

Yegorov A.N., Russia

10:00-10:20

Complex study of bottom sediments occurring in Khakasia lakes for medical purposes

Dzhabarova N.K., Yudina N.V., Karelina O.A., Klopotova N.G., Russia

10:20-10:40

Slide show "MY FIELD TRIPS TO THE PAROO (Australia)"

Timms B.V., Australia

10:40-11:00

Coffee-break

11:00-12:25 **Structural organization of salt lake biota, genetic diversity, spatial heterogeneity, seasonal variability**

ORAL PRESENTATIONS OF POSTERS. SESSION III

Chairmen: Prof. Dzhabarova N.K., Prof. Knott B.

First results obtained from a study of micro-zoobenthos of mineral lakes located in the Taheranskaya steppe, the west coast of Lake Baikal

Arov I.V., Pen'kova O.G., Russia

System for analysis of time series of satellite images of internal reservoirs with atmospheric correction algorithms usage

Chernetsky M.M., Russia

Benthic diatoms in the salinas of the DryCreek Saltfields

Cook F. S., Coleman P.S.J., Australia

The variability of life history parameters in Artemia as the adaptive mechanism for the existence in unpredictable salt lake ecosystems

Golubev A.P., Roschina N.N., Russia

On the composition of heteroorganic compounds of the lipids of recent sediments

Golushkova E.B., Sagachenko T.A., Burkova V.N., Russia

The effect of the wood on the water analysis and the quality of river waters of the basin of lake Shira

Gribov A.I., Anyushin V.V., Khabarov N.N., Budaeva L.I., Russia

Some aspects of the thermal regime and phytoplankton distribution of the brackish Shira lake

Kartushinsky A.V., Russia

Chemical composition of lakes Shira region

Kopylova J.G., Smetanina I.V., Lysova O.V., Russia

Water chemical composition in Artemia lakes of Western Siberia

Kovalenko A.I., Litvinenko L.I., Russia

Biogeochemical background and technogenic pollution of the altai lakes by mercury

Leonova G.A., Scherbov B.L.

The community of phototrophic sulfur bacteria in meromictic salt lake Mogilnoye

Lunina O. N., Gorlenko V.M., Russia

Microbial processes of methane cycle in meromictic lake Mogilnoye (Island Kildin, Barents Sea)

Rusanov I.I., Yusupov S.K., Pimenov N.V., Russia

On the effect of cannibalism intensity on the functioning of aquatic ecosystems

Shirobokova I.M., Pechurkin N.S., Russia

Trophic ranging of reservoirs and water fitosystems on totality of biogeochemical characteristics.

Yurchenko Yu.Yu., Ukraine

The biological characteristic of small salt lakes of Odessa region

Yurchenko Yu.Yu., Goncharov A.Yu., Khutoroy S.A., Zotov A.B., Drimanova I.A., Nastencko E.V., Ribalko A.A., Ukraine

The adaptation analysis aspect of the vegetation of halophytic grasslands to different salinity conditions at red lake of the Republic of Khakasia

Zorkina T.M., Zhukova V. M., Russia

12:25-14:00

Poster viewing

13:20-14:00

ISSLR member meeting

Chairman: Prof. Jellison Robert

14:00-15:00

Lunch

15:00-15:35

Management of salt lakes for biotechnological and medical purposes

ORAL PRESENTATIONS OF POSTERS. SESSION IV

Chairman: Prof. Degermendzhy Andrei G.

Maintenance of the genetically modified strain *Escherichia coli* Z905/pPHL7 in the sterile water of Shira lake

Boyandin A.N., Lobova T.I., Popova L.Yu., Russia

The use of salines to produce bioactive additives to food and mineral water concentrate

Burkova V.N., Boev S.G., Russia

About possibility of application haloalkalophilic microorganisms in oil-polluted extreme ecosystems bioremediation

Bulbovich A.R., Oborin A.A., Ilarionov S.A., Russia

The inhibition kinetics and adaptation of *Escherichia coli* to lithium ions

Evdokimov E.V., Sharubin S.A., Russia

Morphological characteristics of biofilms formed by some *Bacillus* species isolated from Shira lake

Krylova T.Yu., Mogilnaya O.A., Popova L.Yu., Russia

Dynamics of manifestation of antibiotic resistance by heterotrophic bacteria of Shira lake during 1999-2001

Lobova T. I., Popova L.Yu., Russia

The growth of heterotrophic aerobic bacteria of Shira lake influenced by monovalent alkaline cations K⁺ and Cs⁺

Tyumentseva A.V., Ganusova E.E., Russia

Applications of *in vivo* and *in vitro* bioluminescent systems for ecological monitoring of Shira lake

Vetrova E.V., Kratasyuk V.A., Kudryasheva N.S., Russia

Lipid and hydrocarbon compositions of a wild sample of the green microalga *Botryococcus braunii* isolated from Shira lake

Zhila N.O., Russia

15:35-16:40

Poster viewing

16:40 - 17:00

Coffee-break

17:00-19:00 INTAS monitoring meeting

Chairman: Prof. Degermendzhy Andrei G.

17:00-17:20

The Crimean hypersaline lakes: II. Microbial community structure and potential influence on the temperature fields

Shadrin N.V. (Ukraine), Mukhanov V.S. (Ukraine), Naidanova O.G. (Ukraine), Nevrova E.L. (Ukraine), Kemp R.B.(UK), Yeremin O.Yu. (Ukraine)

17:20-17:40

Numerical modeling of hydrophysical processes in lake Shira

Belolipetskii V.M., Gavrilova L.V., Genova S.N., Kompaniets L.A., Lukavenko P.N., Russia

17:40-18:00

Patchy environment as a factor of complex spatio-temporal plankton dynamics: a theoretical study

Medvinsky A.B. (Russia), Tikhonova I.A. (Russia), Malchow H. (Germany)

18:00-19:00

Discussion

**19:00-20:00 CLOSING CEREMONY
(Conference Hall)**

19:00-19:40 Addresses

*Prof. Andrey G. Degermendzhy, The Chairman of the
Scientific Organizing Committee*

*Prof. Robert S. Jellison., The Secretary of the International
Society for Salt Lake Research*

Conference Guests (2-3 minutes per presentation)

19:40-20:00

Press-conference

20:00

Farewell Party

