

V International Scientific
Conference to commemorate
famous hydroecologist
Georgij G. Winberg
October 12-17, 2015

Photo by mobile phone
N.V. Aladin

Пятая международная
конференция памяти члена-
корреспондента АН СССР
профессора Г.Г. Винберга
12-17 октября 2015 г.

Фото с мобильного телефона
Н.В. Аладин

ОЦЕНКА КАЧЕСТВА ВОДЫ В РЕКАХ ЛУГА, САБА И ЯЩЕРА (Ленинградская область) С ПОМОЩЬЮ МАКРОФИТОВ

EVALUATION OF WATER QUALITY IN RIVERS LUGA, SABA AND YASHERA (Leningrad region) BY MEANS OF MACROPHYTES

Dr. Irina Zhuravskaya, Institute of Science, St. Petersburg, Russia

ВВЕДЕНИЕ

РЕЗЮМЕ

РЕЗУЛЬТАТЫ

СПАСИБО

СПАСИБО



The aims of our study:

Methods

Results and Discussion



17

10

IMPACT OF HPP RESERVOIRS AND RIVER RESTORATION ON DEVELOPMENT OF BENTHIC INVERTEBRATE COMMUNITIES IN SOME RIVERS OF LATVIA

Arkādījs Poppels, Rīga National Zoo, Mēla prospekts 1, LV-1014
Rīga, Latvia E-mail: arpop@zoo.lv

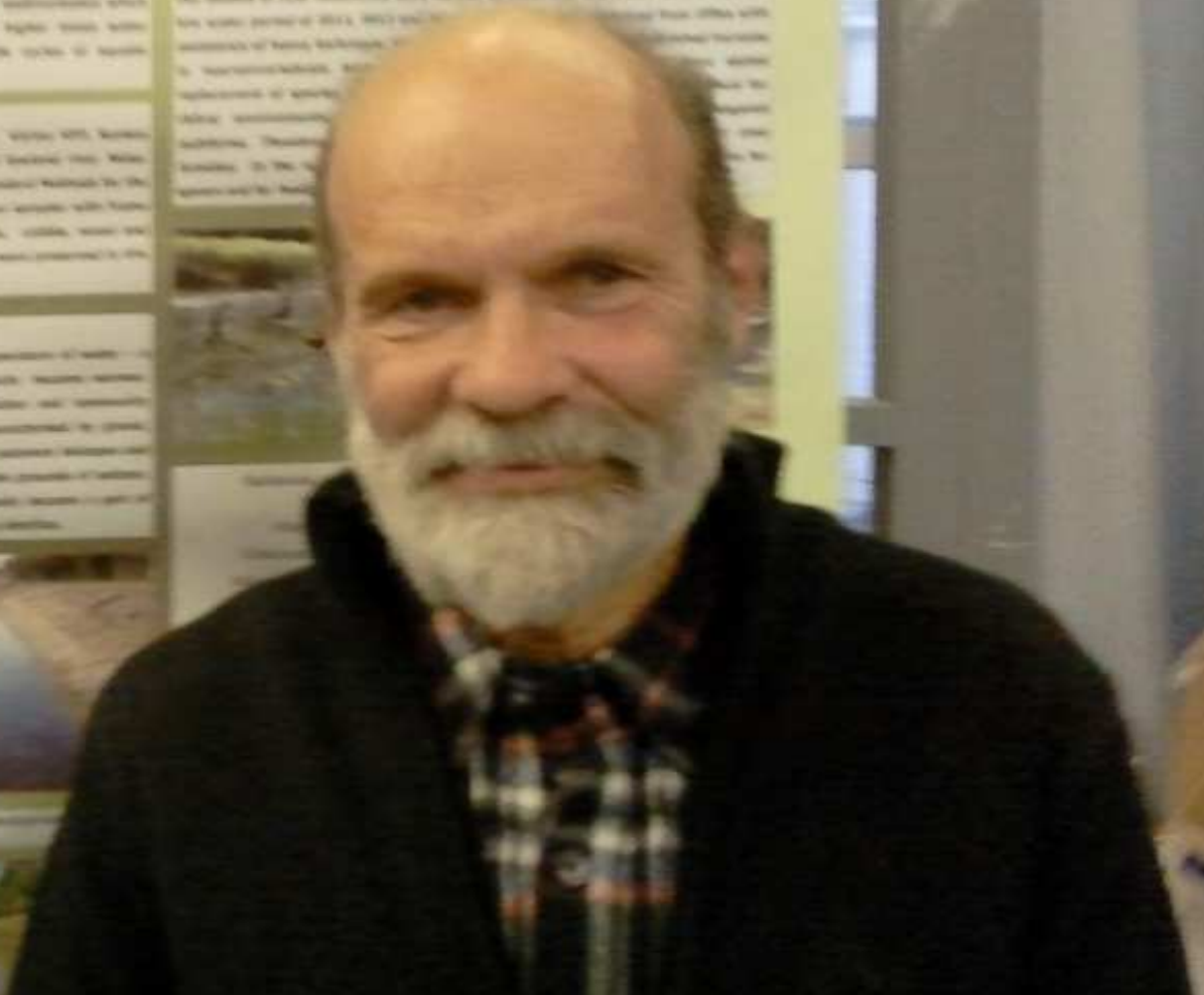
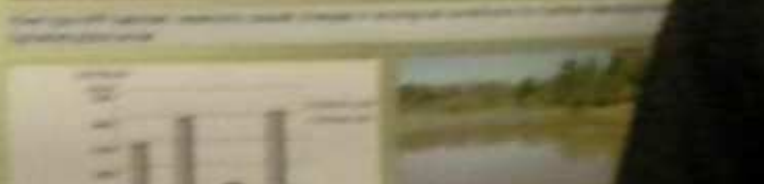


INTRODUCTION
Due to the need for the complete ecological restoration of stretches of macroinvertebrate communities, caused by effects of building HPP reservoirs from the 60 years ago from one side, and effects caused by river restoration implemented in the 90s from the opposite side.

Ecological conditions have changed after building several HPP reservoirs in the rivers, some stretches of that there were observed changes in a sediment composition caused by sedimentation which also affected macroinvertebrate and macrophyte structure. Sediment water flow and higher water velocity important water flow factors controlling the distribution, abundance and life cycle of aquatic macroinvertebrates.

MATERIALS AND METHODS
Studies of benthic macroinvertebrate communities were held in stretches with HPP reservoirs, stretches with HPP reservoirs, stretches with river restoration and in stretches that were not affected. Macroinvertebrate samples were taken according to AQEM standard procedure and identified according to the methodology of Madsen and Westwater. Qualitative structure was collected by field samples with Pooter. Data on the number of individuals per sample and biomass, water quality, water velocity and temperature were collected. Water velocity was measured with a float and water temperature with a thermometer.

RESULTS AND DISCUSSION
Due to the ecological conditions were changed between the river restoration of water flow (river restoration, by damming, damming and the river of aquatic macroinvertebrates. Changes in sediment composition through sedimentation after damming construction and restoration. River restoration led to changes in sediment composition, water velocity and water temperature. Macroinvertebrate communities were affected by river restoration. The number of individuals per sample and biomass, water quality, water velocity and temperature were collected. Water velocity was measured with a float and water temperature with a thermometer.



ВВЕДЕНИЕ

Изменение экосистемных процессов в водных экосистемах в 2014 году в связи с...

ЦЕЛЬ ИССЛЕДОВАНИЯ

Цель исследования - определить влияние изменения структуры донных сообществ на...

РЕЗУЛЬТАТЫ И ОБСУЖДЕНИЕ

ВИДОВОЕ РАЗНООБРАЗИЕ

В период исследования в 2014 году в Минусинске были обнаружены 62 вида...

Издание исследования, представлено в виде таблицы (табл. 1)...

Таким образом, состав макроинверсии в центральной и литоральной зонах...

Table with multiple columns and rows, likely containing species names and abundance data.



Общая численность зообентоса в среднем достигала от 200 до 1000 индив. образца...

Максимальная численность отмечена для центральной зоны течения...

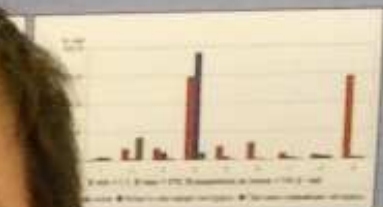


Рис. 1. Численность зообентоса в различных зонах течения...

Средняя численность зообентоса в центральной и литоральной зонах...

- Ветиллярия
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Максимальная численность зообентоса в литоральной зоне...

INTRODUCTION

Aim of our study caused by effects river restoration p Ecological conditi streams. At first b alter species con temperature were invertebrates.

MATERIALS AND M

Studies of benthic HPP and Galgausk Macroinvertebrate examination of Wat 25x25 cm - Sample macrophyte substra formaldehyde solut

RESULTS AND DISCU

Due river regulation major factor control Changes in substrat structure. More ove pebbles, cobbles and due to process of age Former stretch of rbi reservoir covered by a



River type HPP channel, Luchanovskaya's spring

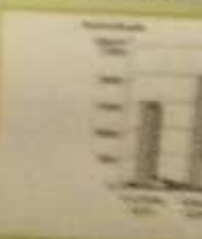


Рис. 2. Численность зообентоса в различных зонах течения...









Introduction
 The study aims to investigate the impact of anthropogenic activities on the ecological state of the water area... (text is partially obscured and blurry)

Results

Percent abundance of the quantitatively prominent bacterial phyla and a list of genera in the experiment

Clustering of bacterial strains from the reservoir based on MCLUST 7.0 - initial sample 1, 14 - reservoir with the addition of 1 mg/L of ions, 25.1 - 25.6 - 10 mg/L, 285.1 - 285.6 - 220 mg/L. A numerical value in the designation of the samples corresponds to the day of the experiment.

... (text is partially obscured and blurry)

Methods
 Assessment of the ecological status of the water area... (text is partially obscured and blurry)

For carrying out tests freshwater biotests, *Anodonta cygnea* L., were collected in the following water areas: in estuary of the Neva River in shorre of Kamenny district and in shorre of Peterhof, on the Rybinsk Reservoir (Novik) and the Yagorba River (Chernopost). Study areas differ significantly in anthropogenic level.

The fiber optic system for non-invasive monitoring of the heart rate (HR) in adult mollusk was used (Kholodkevich et al., 2010-2011). Method is based on the assessment of the compensatory response of test organisms to functional load as rapid changes in water salinity by addition of 6 g/L NaCl for 1 h (hyper-osmotic stress). Time of HR recovery (T_{HR}) to norm after exclusion of the load was calculated as the time (in min) needed for recovery of HR to individual background HR specific patterns.

The methods cover response at the organism level and bridge the contamination level of the environment to the health state of local biota.

Change of HR of *Anodonta* from p salinity change. Up arrow indicate the restoration of the freshwater in

Heart rate, beats/min

NaCl, g/L

Recovery time of HR (T_{HR}) at freshwater

Table 1: Assessment criteria for heart rate recovery time after loading in mollusks

Heart rate (beats/min)	HR	T_{HR} (min)
120-140	100	10-15
140-160	100	15-20
160-180	100	20-25
180-200	100	25-30
200-220	100	30-35
220-240	100	35-40
240-260	100	40-45
260-280	100	45-50
280-300	100	50-55
300-320	100	55-60
320-340	100	60-65
340-360	100	65-70
360-380	100	70-75
380-400	100	75-80
400-420	100	80-85
420-440	100	85-90
440-460	100	90-95
460-480	100	95-100
480-500	100	100-105
500-520	100	105-110
520-540	100	110-115
540-560	100	115-120
560-580	100	120-125
580-600	100	125-130
600-620	100	130-135
620-640	100	135-140
640-660	100	140-145
660-680	100	145-150
680-700	100	150-155
700-720	100	155-160
720-740	100	160-165
740-760	100	165-170
760-780	100	170-175
780-800	100	175-180
800-820	100	180-185
820-840	100	185-190
840-860	100	190-195
860-880	100	195-200
880-900	100	200-205
900-920	100	205-210
920-940	100	210-215
940-960	100	215-220
960-980	100	220-225
980-1000	100	225-230

Table 2: Recovery time of HR (T_{HR}) at freshwater

Heart rate (beats/min)	T_{HR} (min)
120-140	10-15
140-160	15-20
160-180	20-25
180-200	25-30
200-220	30-35
220-240	35-40
240-260	40-45
260-280	45-50
280-300	50-55
300-320	55-60
320-340	60-65
340-360	65-70
360-380	70-75
380-400	75-80
400-420	80-85
420-440	85-90
440-460	90-95
460-480	95-100
480-500	100-105
500-520	105-110
520-540	110-115
540-560	115-120
560-580	120-125
580-600	125-130
600-620	130-135
620-640	135-140
640-660	140-145
660-680	145-150
680-700	150-155
700-720	155-160
720-740	160-165
740-760	165-170
760-780	170-175
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820-840	185-190
840-860	190-195
860-880	195-200
880-900	200-205
900-920	205-210
920-940	210-215
940-960	215-220
960-980	220-225
980-1000	225-230

...generation and ... October monthly of 5-10 stations in ... and ... software package Surf ...



...distribution the proportion of ... abundance of ... in ... Lagoon in 2007-2010



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AGE STRUCTURE OF *LIPIZONOTUS SCORINATUS* AND *LIPIZONOTUS IMBRICATA* (POLYCHAETA, POLYCHAETA) POPULATION IN SUBLITTORAL KELP ECOSYSTEMS OF KAZAN ARCHIPELAGO

L. I. Abdullina, R. I. Gubdulina, A. X. Gilbin, E. M. Sultan
Kazan (Votga region) Federal University, Kazan, Russia

ARTYFITSY

Abstract: The article describes the results of the study of the age structure of the populations of the polychaetes *Lipizonotus scorinatus* and *Lipizonotus imbricata* in the sublittoral kelp ecosystems of the Kazan Archipelago. The study was carried out in the Krasnodarsky Bay. The data on the age structure of the populations of the polychaetes are presented. It is shown that the populations of the polychaetes are represented by individuals of different ages. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm.

Methodology

The populations of the polychaetes were studied in the Krasnodarsky Bay. The data on the age structure of the populations of the polychaetes are presented. It is shown that the populations of the polychaetes are represented by individuals of different ages. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm.

Results and discussion

The populations of the polychaetes are represented by individuals of different ages. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm.

Conclusions


The populations of the polychaetes are represented by individuals of different ages. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm. The average length of the individuals of the populations of the polychaetes is 2.5-3.5 cm.

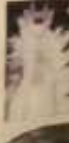
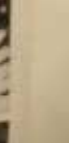








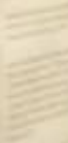

References

1. Abdullina L. I., Gubdulina R. I., Gilbin A. X., Sultan E. M. (2023) Age structure of *Lipizonotus scorinatus* and *Lipizonotus imbricata* (Polychaeta, Polychaeta) population in sublittoral kelp ecosystems of Kazan Archipelago. *Journal of Marine Biology*, 10(1), 1-10.

2. Abdullina L. I., Gubdulina R. I., Gilbin A. X., Sultan E. M. (2023) Age structure of *Lipizonotus scorinatus* and *Lipizonotus imbricata* (Polychaeta, Polychaeta) population in sublittoral kelp ecosystems of Kazan Archipelago. *Journal of Marine Biology*, 10(1), 1-10.

3. Abdullina L. I., Gubdulina R. I., Gilbin A. X., Sultan E. M. (2023) Age structure of *Lipizonotus scorinatus* and *Lipizonotus imbricata* (Polychaeta, Polychaeta) population in sublittoral kelp ecosystems of Kazan Archipelago. *Journal of Marine Biology*, 10(1), 1-10.



Size-weight Characteristics of Larvae of North-West Russia West of Chronomid (*Espea Chronomid*) Larvae

1. Abdullina L. I., Sultan E. M.
2. Gubdulina R. I., Gilbin A. X.

Abstract

The article describes the results of the study of the size-weight characteristics of the larvae of the polychaete *Espea Chronomid* in the North-West Russia. The study was carried out in the Krasnodarsky Bay. The data on the size-weight characteristics of the larvae of the polychaete are presented. It is shown that the larvae of the polychaete are represented by individuals of different sizes. The average length of the larvae of the polychaete is 1.5-2.5 cm. The average weight of the larvae of the polychaete is 0.1-0.2 mg.

Methodology

The larvae of the polychaete were studied in the Krasnodarsky Bay. The data on the size-weight characteristics of the larvae of the polychaete are presented. It is shown that the larvae of the polychaete are represented by individuals of different sizes. The average length of the larvae of the polychaete is 1.5-2.5 cm. The average weight of the larvae of the polychaete is 0.1-0.2 mg.

Results and discussion

The larvae of the polychaete are represented by individuals of different sizes. The average length of the larvae of the polychaete is 1.5-2.5 cm. The average weight of the larvae of the polychaete is 0.1-0.2 mg.

Conclusions

The larvae of the polychaete are represented by individuals of different sizes. The average length of the larvae of the polychaete is 1.5-2.5 cm. The average weight of the larvae of the polychaete is 0.1-0.2 mg.

References

1. Abdullina L. I., Sultan E. M., Gubdulina R. I., Gilbin A. X. (2023) Size-weight characteristics of larvae of the polychaete *Espea Chronomid* in the North-West Russia. *Journal of Marine Biology*, 10(1), 1-10.

2. Abdullina L. I., Sultan E. M., Gubdulina R. I., Gilbin A. X. (2023) Size-weight characteristics of larvae of the polychaete *Espea Chronomid* in the North-West Russia. *Journal of Marine Biology*, 10(1), 1-10.

3. Abdullina L. I., Sultan E. M., Gubdulina R. I., Gilbin A. X. (2023) Size-weight characteristics of larvae of the polychaete *Espea Chronomid* in the North-West Russia. *Journal of Marine Biology*, 10(1), 1-10.





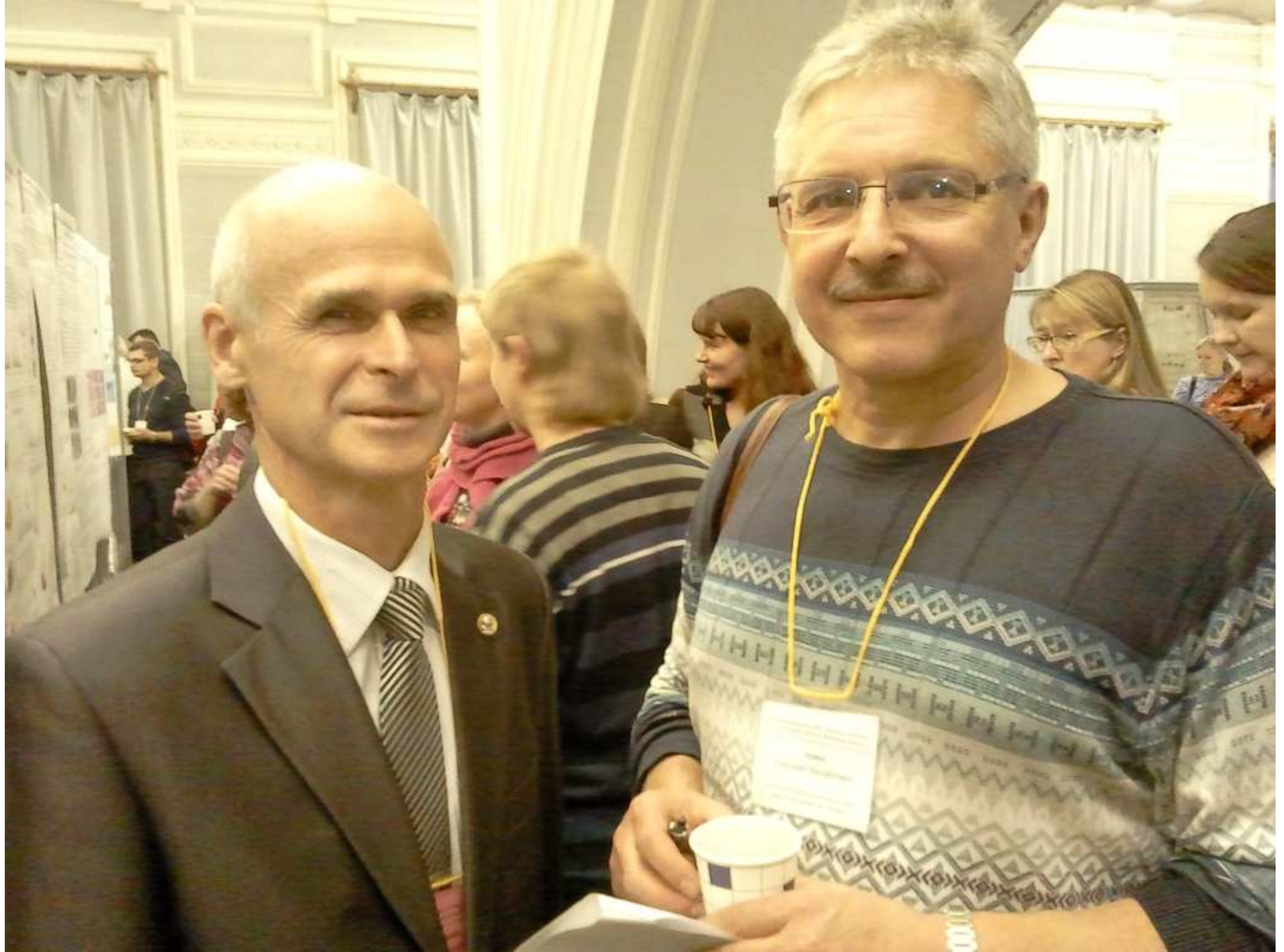




















































Stations of the annual sampling of planktonic and benthic communities in the Neva Estuary











design

Ne. Scientific Office, Law Biological Research Station of the
Agrarian Institute in September-October 2011

10 samples from museum culture *Ascaris suum* (Chase Bay
to a depth of 2 m at a water temperature of 21°)

10 glands samples (0.5) were taken from the mussels (a day
1), and then 1, 1 and 10 days after the addition of oil



TOXICOLOGICAL ASSAY OF
ENVIRONMENT WITH ENZYME
BIOLUMINESCENT SYSTEM OF
LUMINOUS BACTERIA

Esimbekova , Valentina Kratasyuk

*Faculty of Chemistry, Department
of Biochemistry, BNU, Almaty, Kazakhstan*













Thank you for your attention













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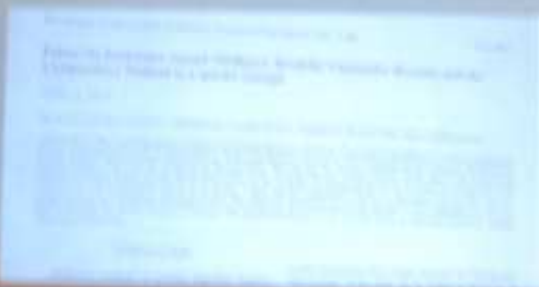


Comparatory Method and Biological Species Concept

Компаративний метод (КМ) і біологічний вид (БВ)

"The current taxonomy of freshwater mussels ... is confused by two competing species concepts: the Biological Species Concept (BBC) and the Comparatory Method (CM). The CM use the "frontal contour" of the shell as the primary/sole character to define bivalve species ... The traditional, Biological species are regarded as better representative of actual species diversity, but further revision is required."

Daniel Graf, 2007



- Polychlorinated biphenyls (PCBs) are one of the groups of persistent organic pollutants (POPs) which are prevalent in environment around the world.
- During last 30 years PCBs are in a focus of many environmental researches and recommended by UNEP for paramount consideration when ecotoxicological investigations are conducted.

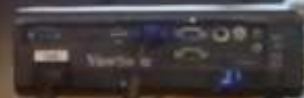


A presentation slide displayed on a projector screen. It features three landscape photographs of Lake Kinneret: a wide view of the lake under a blue sky, a view of the shoreline with reeds, and a view of the lake reflecting the sky. To the right of the photos is the conference information and the speaker's name and title.

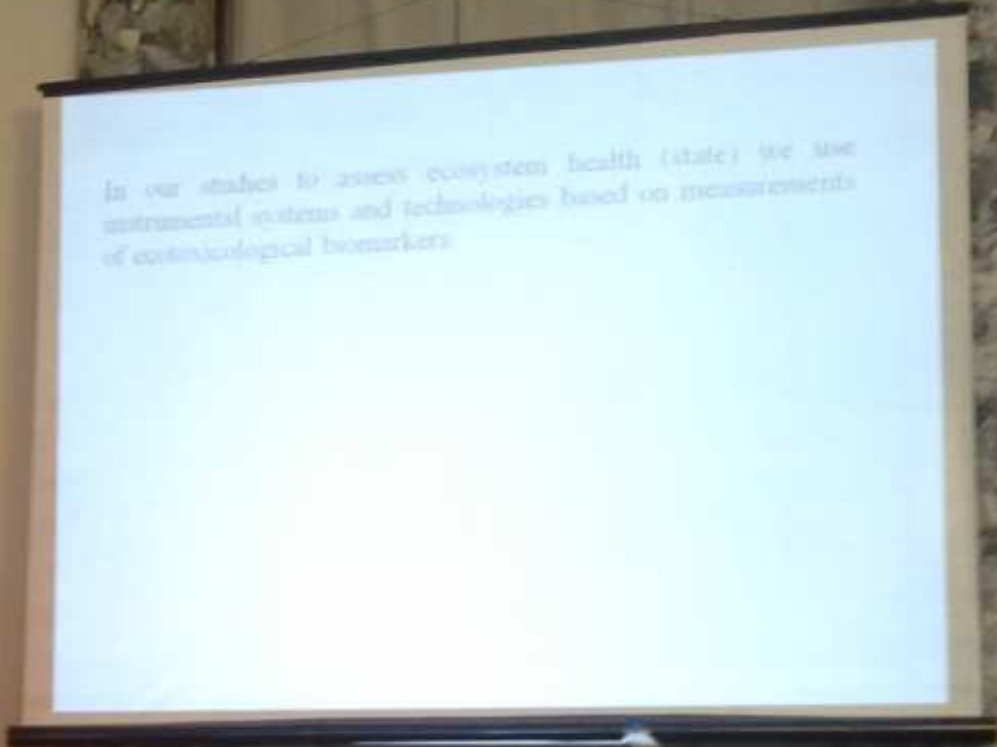
5th International
Winberg
Conference
12-17.10.2015
St. Petersburg
Russia

Moshe Gophen-Migal Israel

Anthropogenic impact On the
Lake Kinneret (Israel) Ecosystem:
Long term Perspectives



In our studies to assess ecosystem health (state) we use
instrumental systems and technologies based on measurements
of ecological biomarkers.









**SURFACE WATERS BY POLYCHLORINATED
BIPHENYLS**

G.M. Shuiko¹, D.A. Filippov¹, E.S. Bredikhin², A.V. Shelepchikov²

¹ Institute for Biology of Sealand (IBS) Russian Academy of Sciences
² Institute of Ecology and Evolution (I.E.E.) Russian Academy of Sciences

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Certificate

In recognition of the work of the government in the long battle

