

May 20~22, 2004

1st Korea Japan Joint Limnology Symposium

Material Cycling and Long-Term Ecological Research in Freshwater Ecosystems

Thursday, May 20

8:00 ~ 9:00 - Registration

9:00 ~ 9:30 - Opening Ceremony

Opening address of the symposium (presidents of the JSL & KSL)

* Dr. Jong Bin LEE (*Chonnam National University, Korea*)

* Dr. Norio OGURA (*Tokyo University, Japan*)

Welcoming address ;

* Dr. Inn Se KIM (*President of Pusan National University, Korea*)

9:40 ~ 10:10

Invited talk 1

Friedrich Recknagel (*University of Adelaide, Australia*)

“Ecological Informatics and its Application in Limnology”

Chair; Gea Jae JOO (*Pusan National University, Korea*)

(Presentation: 15 min / Question and answer: 5 min)

(Session 1, 3, 8)

Material Cycling/ LTER/ Impact of Climate Change on Lakes and Reservoir

Convener & Chair; Soon-Jin HWANG (*Konkuk University, Korea*)

Osamu MITAMURA (*Shiga Prefecture University, Japan*)

10:20 ~ 10:40 Yasuhiro TAKEMON (*Kyoto University, Japan*)

Suspended POM dynamism during artificial flushing in a stream channel

10:40 ~ 11:00 Chang Keun KANG (*Pusan National University, Korea*)

A Stable carbon and nitrogen isotope study of freshwater food webs in a Korean stream-reservoir system

- 11:00 ~ 11:20 Hideyuki DOI (*Tohoku University, Japan*)
Carbon stable isotope ratios of phytoplankton and benthic diatoms in Lake Katanuma with reference to those of other lakes
- 11:20 ~ 11:40 Kyung-Hoon SHIN (*Hanyang University, Korea*)
Dynamics of organic matter in the western Arctic: stable isotope ratios of organic carbon and nitrogen
- 11:40 ~ 12:00 Muneoki YOH (*Tokyo University, Japan*)
Nitrogen saturation and incipient acidification in some forested area in Japan as indicated by streamwater chemistry

12:00 ~ 13:20 - Lunch

13:20 ~ 14:50

Invited talk 2

Elena Sideltseva (*International Department of the ISC SB RAS, Russia*)
“Baikal – the treasury of World Heritage”

Chair; Myung-Soo HAN (*Hanyang University, Korea*)

Convener & Chair; Bomchul KIM (*Kangwon National University, Korea*)
Toshi NAGATA (*Kyoto University, Japan*)

- 13:50 ~ 14:10 Toshi NAGATA (*Kyoto University, Japan*)
A 35 years record of some limnological variables in Lake Biwa
- 14:10 ~ 14:30 Gea Jae JOO (*Pusan National University, Korea*)
Long-term change of plankton dynamics of Nakdong River
- 14:30 ~ 14:50 Hiroshi HIROTANI (*Osaka Kyoiku University, Japan*)
Seasonal cycle and the vertical profile of alkaline phosphatase activity in a dam reservoir
- 14:50 ~ 15:10 Bomchul KIM (*Kangwon National University, Korea*)
Long term change of trophic state and biota in a reservoir (Lake Soyang, Korea)

15:10 ~ 16:00 – Poster session

(Coordinators; Koji OMORI (*Ehime University, Japan*)
Kimio HIRABAYASHI (*Shinshu University, Japan*)
Kentaro NOZAKI (*Sugiyama Jogakuen University, Japan*)
Kwang-Guk AN (*Chungnam National University, Korea*)
Jung Ho LEE (*Taegu University, Korea*)
Jae-Ki SHIN (*Korea Water Resources Corporation, Korea*)

Chair; Se Hwa KIM (*Yongin University, Korea*)
Koichiro KURAJI (*Tokyo University, Japan*)

- 16:00 ~ 16:20 Shuichi SHIKANO (*Tohoku University, Japan*)
Interannual variations of limnological and ecological characteristics in acidic Lake Katanuma
- 16:20 ~ 16:40 Koichiro KURAJI (*Tokyo University, Japan*)
Japan Ecosystem Research Network (JERN) and Japanese Long-Term Ecological Research (JaLTER): an opportunity for collaboration between terrestrial ecosystem ecologists and limnologists
- 16:40 ~ 17:00 B. C. JHA (*Central Inland Fisheries research Institute, India*)
Ecology and fisheries of Chilika Lagon, Orissa, India

Convener & Chair; Richard D. ROBARTS (*UNEP GEMS/Water Programme, Canada*)
Michio KUMAGAI (*Lake Biwa Research Institute, Japan*)

- 17:00 ~ 17:20 Richard D. ROBARTS (*UNEP GEMS/Water Programme, Canada*)
Global monitoring of lakes and reservoirs to assess climate change impacts
- 17:20 ~ 17:40 Hojeong KANG (*Ewha Womans University, Korea*)
Rising atmospheric CO₂ and N deposition may promote DOC export from wetlands by enhanced plant exudation
- 17:40 ~ 18:00 Tadashi ARAI (*Rissho University, Japan*)
Incomplete whole circulation of Lake Ikeda, Kyusyu, Japan
- 18:00 ~ 18:20 Michio KUMAGAI (*Lake Biwa Research Institute, Japan*)
Climate Change and its Impact on Lake Biwa, Japan's Largest Lake

18:30 ~ - Reception

Friday, May 21

7:30 ~ 8:30 - Breakfast

8:30 ~ 9:00

Invited talk 3

Peter A. Whigham (*Otago University, New Zealand*)

“Modelling of Freshwater systems: New Ideas and Future Directions”

Chair; Richard D. ROBARTS (*UNEP GEMS/Water Programme, Canada*)

9:00 ~ 10:50 Symposium (Room A/ Room B/ Room C)

10:50 ~ 11:20 Poster session

11:20 ~ 13:10 Symposium (Room A/ Room B/ Room C)

Room A

(Session 2, 4)

Limnology of River Ecosystem

Population and Community Dynamics, Modeling

Convener & Chair; Kyung-Je CHO (*Inje University, Korea*)

Yasuhiro TAKEMON (*Kyoto University, Japan*)

9:00 ~ 9:20 Hitoshi MIYASAKA (*Ehime University, Japan*)

Stable isotope analyses of the benthic food web along the longitudinal pattern in a Japanese urban river

9:20 ~ 9:40 Kwang-Guk AN (*Chungnam National University, Korea*)

Multimetric Monitoring Approaches For Stream Ecosystem Health Assessments

9:40 ~ 10:00 Izumi KATANO (*Nara Women's University, Japan*)

Drift dispersals due to resource depletion and the dynamics of longitudinal distribution of a grazer caddisfly, *Micrasema quadriloba*

10:00 ~ 10:20 Sang-Ok CHUNG (*Kongju National University, Korea*)

Practical application of French Biological Diatom Indices (Indice Biologique Diatomées) in the networks for stream water quality measurement

10:20 ~ 10:40 Hyun Woo KIM (*Sunchon National University, Korea*)

Inter-annual variability of zooplankton community dynamics in the lower part of the Nakdong River (1993-2003)

10:40 ~ 11:10 - Poster session

(Coordinators; Han Soon KIM (*Kyungpook National University, Korea*)
Se Hwa KIM (*Yongin University, Korea*)
Hojeong KANG (*Ewha Womans University, Korea*)
Shuichi SHIKANO (*Tohoku University, Japan*)
Midori HARA (*Rissho University, Japan*)
Hiroshi HIROTANI (*Osaka Kyoiku University, Japan*)

Convener & Chair; Tae-Soo CHON (*Pusan national University, Korea*)
Yuichi HAYAMI (*Ehime University, Japan*)

- 11:10 ~ 11:30 Kyung Seok BAE (*Seoul Metropolitan Institute of Health and Environment , Korea*)
Recovery prespect of watercourse and aquatic animal fauna in the Cheonggye creek of Seoul, Korea
- 11:30 ~ 11:50 Tae-Soo CHON (*Pusan National University, Korea*)
Implementation of the Self-Organizing Mapping in Revealing Temporal Community Patterns and Inter-Taxa Classification
- 11:50 ~ 12:10 Kwang-Seuck JEONG (*Pusan National University, Korea*)
Modeling of river phytoplankton
- 12:10 ~ 12:30 Jin-Yong HA (*Shinshu University, Japan*)
Occurrence of *Daphnia* and its impact on zooplankton community structure and water quality in a biomanipulate lake, Lake Sirakaba, Japan
- 12:30 ~ 12:50 J. K. KIM (*Catholic University, Korea*)
Microbial web modeling of the lower part of Nakdong River, Korea
- 12:50 ~ 13:10 Sang- Hee LEE (*Pusan National University, Korea*)
Changes in Phototatic Orientation of *Daphnia magna* to the Treatments of Diazinon at Low Concentrations: from Model to Experiments

Room B

(Session 5, 6)

Restoration of Aquatic Ecosystem/ Microbial Ecology

Convener & Chair; Tae- Seok AHN (*Kangwon National University, Korea*)

Yasushi SEIKE (*Shimane University, Japan*)

9:00 ~ 9:20 Soon-Jin HWANG (*Konkuk University, Korea*)

Evaluation of Water Quality Effect Using a Filter-Feeding Freshwater Bivalve
(*Corbicula leana*) in a Eutrophic Lake

9:20 ~ 9:40 Yoon-Ho KANG (*Hanyang University, Korea*)

Identification of bio-agent capable of controlling *Stephanodiscus hantzschii*
blooms and its evaluation of algicidal activity

9:40 ~ 10:00 Tae- Seok AHN (*Kangwon National University, Korea*)

Role of bacteria for growing macrophyte in Lake Paro, oligo-mesotrophic
lake in Korea

10:00 ~ 10:20 Heejin CHOI (*Hanyang University, Korea*)

Isolated *Streptomyces neyagawaensis* controls the biomass of *Microcystis*
aeruginosa

10:20 ~ 10:40 Young-Sik HAM (*The Musashi Institute of Technology, Japan*)

Hydrogeochemical environmental research in nitrate contamination in
alluvial fan area groundwater in Tsukui, Central Japan

10:40 ~ 11:10 - Poster session

(Coordinators; Han Soon KIM (*Kyungpook National University, Korea*)

Se Hwa KIM (*Yongin University, Korea*)

Hojeong KANG (*Ewha Womans University, Korea*)

Shuichi SHIKANO (*Tohoku University, Japan*)

Midori HARA (*Rissho University, Japan*)

Hiroshi HIROTANI (*Osaka Kyoiku University, Japan*)

Convener & Chair; Shin-ichi NAKANO (*Ehime University, Japan*)

Geon-Hyoung LEE (*Kunsan National University, Korea*)

11:10 ~ 11:30 Kenji SUGIMORI (*Toho University, Japan*)

- Sulfate - reducing bacteria activity and the relationship to iron species in Japanese river sediment
- 11:30 ~ 11:50 Young-Ok LEE (*Daegu University, Korea*)
Dynamics of in situ Bacterial community structure in the Nakdong River
- 11:50 ~ 12:10 Yoko NISHIMURA (*Kyoto University, Japan*)
Bacterioplankton in Lake Biwa: possible factors that affect seasonal dynamics of different subgroups distinguished by flow cytometry
- 12:10 ~ 12:30 Geon-Hyoung LEE (*Kunsan National University, Korea*)
Distribution and Antibiotic Resistance of Heterotrophic Bacteria on the Lower Geum River
- 12:30 ~ 12:50 Chulgoo KIM (*Kyoto University, Japan*)
High potential activity of alkaline phosphatase in the benthic nepheloid layer of a large mesotrophic lake: Its role in phosphorus regeneration in oxygenated hypolimnion
- 12:50 ~ 13:10 Shin-ichi NAKANO (*Ehime University, Japan*)
Microbial ecology in biofilms on pebbles in streams

Room C
(Session 7)

Ecosystem Health, Toxicity, Fish, Other topics

Convener & Chair; Yong-Jae KIM (*Daejin University, Korea*)
Nobutada NAKAMOTO (*Shinshu University, Japan*)

9:00 ~ 9:20 Chi Yong AHN (*Research Institute of Bioscience and Biotechnology, Korea*)
Selective Control of Cyanobacteria by Ultrasonic Radiation in Eutrophic Pond

9:20 ~ 9:40 Seong Uk WUI (*Chonnam National University, Korea*)
Population dynamics of Constituent species and ecosystem assessment in aquatic microcosm by using Dimethyl 2,2,2-Trichloro-1-hydroxyethylphosphonate

9:40 ~ 10:00 Masatoshi MOTOKI (*Rissho University, Japan*)
The change of total water balance including municipal and irrigation waters in the Koise River Basin, Ibaraki Prefecture, Japan

10:00 ~ 10:20 Jinwon SEO (*Korea Institute of Water and Environment, Korea*)
Ecological Risk Assessment with Biomonitoring of Wild Fish in a River Receiving Treated Municipal Discharge in Korea

10:20 ~ 10:40 Katsuhiko TAKAHASHI (*Amenity Meeting Room, Japan*)
Monitoring Water with Local Participation in China - Japan Environmental Cooperation for Improving Amenity: West Lake, Hangzhou, 1996-2002

10:40 ~ 11:10 - Poster session

(Coordinators; Han Soon KIM (*Kyungpook National University, Korea*)
Se Hwa KIM (*Yongin University, Korea*)
Hojeong KANG (*Ewha Womans University, Korea*)
Shuichi SHIKANO (*Tohoku University, Japan*)
Midori HARA (*Rissho University, Japan*)
Hiroshi HIROTANI (*Osaka Kyoiku University, Japan*)

Chair; Kyung Seok BAE (*Seoul Metropolitan Institute of Health and Environment, Korea*)
Muneoki YOH (*Tokyo University, Japan*)

11:10 ~ 11:30 Kazuhide HAYAKAWA (*Lake Biwa Research Institute, Japan*)

Distribution of fluorescent whitening agents as an indicator of domestic wastewater

- 11:30 ~ 11:50 Ga Ik CHO (*Pusan National University, Korea*)
The current status of fish biodiversity around the DMZ and CCL area
- 11:50 ~ 12:10 Sayaka ITO (*Ehime University, Japan*)
Mating pattern in a stream goby, *Rhinogobius* sp. CB
- 12:10 ~ 12:30 Kyung-Hee CHOI (*Pusan National University, Korea*)
Computational monitoring of movement behavior of chironomid larvae treated with toxic substances
- 12:30 ~ 12:50 Akiko SHIRAGANE (*Toyota Yahagi River Institute, Japan*)
Long-term changes of the nutrients in the middle-reach of the Yahagi River, central Japan
- 12:50 ~ 13:10 Jong Min KIM (*Youngsan-River Water Environment Research, Korea*)
A study on the algal growth pattern of the Dongbok lake
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13:10 ~ 13:20 - Closing ceremony

13:20 ~ 14:20 - Lunch

14:20 ~ 18:20 - Field Trip (The Nakdong River Estuary)

Coordinators; Gea Jae JOO (*Pusan National University, Korea*)
Kun-Seop LEE (*Pusan National University, Korea*)
Chang-Keun KANG (*Pusan National University, Korea*)

18:20 ~ - Arrival at Campus