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Welcome Message

President of the Pusan National University

Distinguished scholars, honorable guests, and ladies and gentlemen,

On behalf of Pusan National University, I warmly welcome everyone participating in the second symposium of the Benthological Society of Asia at Pusan National University. We realize that rapid industrial and economic development in the latter half of the previous century produced ubiquitous stress and disturbance in the World, especially in Asia. While we are enjoying economic benefits, we are also facing stress and disturbance. Especially aquatic ecosystems are vulnerable to disturbance and water quality maintenance is critical to daily life.

Benthology, to my understanding, is one of the key academic regimes directly related to aquatic ecosystem conservation and water quality management. Presentations and discussions shared among the members during the symposium will contribute to addressing importance of ecological integrity in ecosystem management and conservation of nature.

I sincerely hope that this conference will help to establish scholarly and personal links among the participants. Also enjoy Korean culture while you stay in Busan.

Thank you so much!

Date: June 5, 2014

Ki-Seob Kim
President, Pusan National University

Welcome Message

from President of BSA

On behalf of the Local Organizing Committee, I am very pleased to welcome all of you to The 2nd Symposium of Benthological Society of Asia (BSA) at Pusan National University. We remember the successful opening of the first BSA symposium in Matsumoto, Japan, 2012, and are very happy to host the second symposium in Busan, Korea. Under the theme of “*Aquatic Ecosystem Assessment and Management: from Molecules to Communities*”, we will exchange new ideas in benthology and discuss about future development of aquatic ecosystem management. Along with two special sessions on assessment and molecular biology, and a workshop on taxonomy, we will have sessions in a broad scope including biological monitoring, conservation, management, systematics, biodiversity, community dynamics, physiology, and behavior.

We are especially honored to have plenary speakers, Dr. Robert (Bob) M. Hughes, President of American Fisheries Society, Professor Jane M. Hughes, Griffith University, Australia, and Professor Mutsunori Tokeshi, Kyushu University, Japan. Also I am more than happy to meet organizers and steering committee members, distinguished scholars, and fellow researchers, after traveling such a long distance to participate in this symposium in Korea.

We owe special thanks to our sponsors: Pusan National University, Institute of Environmental Studies, Institute for Basic Science, Research Group for Longevity and Marine Biotechnology, Institute of Environmental Technology and Industry. We also appreciate greatly for the support from National Institute of Biological Resources, The Entomological Society of Korea, The Korean Society of Applied Entomology, Korean Society of Limnology, and The Korean Society of Systematic Zoology.

We anticipate all of you build up good friendships here in Busan and enjoy beautiful sceneries as well as culture in Korea.

Date: June 5, 2014

Tae-Soo CHON
President, Benthological Society of Asia

Organizers and Steering Committee

Yeon Jae BAE (Korea University, Korea)

Tae-Soo CHON (Pusan National University, Korea)

Narumon SANGPRADUB (Khon Kaen University, Thailand)

Kazumi TANIDA (Osaka Prefecture University, Japan)

Koji TOJO (Shinshu University, Japan)

Xinhua WANG (Nankai University, China)

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Sang-Bin LEE (Pusan National University)

June 5 - 7, 2014

Busan, Republic of Korea

Plenary Speakers



Robert (Bob) M. Hughes

President, American Fisheries Society, USA

Time - 1:10 pm, June 5

Title - Bioassessment in Water Resources Management: Use of Macroinvertebrate Assemblages for Assessing Ecological Conditions across Large Regions

E-mail: hughes.bob@amnisopes.com



Jane M. Hughes

Professor, Griffith University, Australia

Time - 9:00 am, June 6

Title - Molecular Approaches to Answering Ecological and Evolutionary Questions

E-mail: jane.hughes@griffith.edu.au



Mutsunori TOKESHI

Professor, Kyushu University, Japan

Time - 1:30 pm, June 6

Title - Resource Use, Patchiness and Complexity: How Do Benthos Coexist in a Community?

E-mail: tokeshi@ambl-ku.jp

Program

Oral Presentation

June 5, 2014 (Thursday)

1:10 pm – 2:00 pm, Grand Hall

Plenary Talk

Robert (Bob) M. HUGHES

Chair: Tae-Soo CHON

2:00 pm – 3:40 pm, Grand Hall

Special Session 1 **Perspective of Riverine Biomonitoring and
Benthic Macroinvertebrates in East Asia**

Chair: Tatyana VSHIVKOVA and Kazumi TANIDA

2:00 pm

Introduction

Tatyana S. VSHIVKOVA

- O01** 2:05 pm Recent trends of riverine biomonitoring and relating matters in Japan
Kazumi TANIDA
- O02** 2:20 pm Current status and perspectives of riverine biomonitoring in Korea
Young-Seuk PARK
- O03** 2:35 pm Development and application of an integrated river health assessment
in Taizi River, northeast China
Xiaodong QU
- O04** 2:50 pm Ecological quality of concreted and unlined sections of a disturbed
stream network in Yuen Long, Hong Kong
Pattiyage I. A. GOMES and Onyx W. H. WA
- O05** 3:05 pm Assessing biotic integrity in Singaporean reservoirs: development of a
benthic index based on a weighted average approach
Yakuta BHAGAT, Esther CLEWS, Yong Tze HO and Marta BOIX-
CANADELL
- O06** 3:20 pm Implementation of modern bioassessment technology to monitoring of
transboundary river basins in the Russian Far East: Tumangan
(Tumen-Ula) and Razdolnaya Rivers (Suifun-He)
Tatyana S. VSHIVKOVA, N.V. KRASNOSLOBODTZEV and Larisa
A. PROZOROVA
- 3:35 pm
- Conclusions
Kazumi TANIDA

3:40 pm – 3:55 pm, Lobby and Lounge

Coffee and Tea Break

June 5 – 7, 2014

Busan, Republic of Korea

3:55 pm – 5:10 pm, Grand Hall

General Session 1

Biological Monitoring and Assessment

Chair: Xiaodong QU and Esther CLEWS

- O07** 3:55 pm Effects of fixed-count subsampling on macroinvertebrate richness, site separation, and bioassessment of Chinese monsoonal streams
Kai CHEN, Robert M. HUGHES and Beixin WANG
- O08** 4:10 pm Distribution patterns of benthic macroinvertebrates and fish community structure in mountain stream, Korea
Mi-Young SONG, Wan-Ok LEE and Ihn-Sil KWAK
- O09** 4:25 pm Categorical and non-linear approaches to identification of intra- and inter-annual variability in benthic macroinvertebrates in tropical freshwater reservoirs.
Marta BOIX-CANADELL, Yong Tze HO and Esther CLEWS
- O10** 4:40 pm Integrative water quality index based on ecological informatics for management of stream ecosystem
Sung-Cheol KOH and Tae-Soo CHON
- O11** 4:55 pm Acidic effects from coal mine reservoir on diversity and haemolymph ions of odonata nymph
Chayanan JITMANEE, Somporn CHANTARA and Chitchol PHALARAKSH

5:10 pm – 6:25 pm, Grand Hall

General Session 2

Conservation, Management, and Modeling

Chair: Chitchol PHALARAKSH

- O12** 5:10 pm Caddisfly Watch Project, biomonitoring of radioactive cesium contamination in rivers and streams after the Fukushima Daiichi nuclear power station accident using *Stenopsyche* (Trichoptera: Stenopsychidae)
Takeshi FUJINO, Daisuke UENO, Osamu INANAMI, Hazuki MIZUKAWA, Izumi WATANABE, Hiromitsu NAGASAKA, Nozomi TATSUTA and Kunihiko NAKAI
- O13** 5:25 pm Macroinvertebrate community response to habitat alteration in regulated mountain stream, Doi Suthep-Pui national park, Thailand
Phuchiwan SURIYAWONG, Porntip CHANTARAMONGKOL, Decha THAPANYA and Elizabeth A. BERGEY
- O14** 5:40 pm Impact of large-scale weir construction on the top-predator fish diet in a large river ecosystem based on the DNA approach
Hyunbin JO, Ju-Duk YOON, Jeong-Soo KIM, Maurice LINEMAN and Gea-Jae JOO
- O15** 5:55 pm Defining type-specific pond conditions in an urban tropical environment
Rop Fun QUEK, Hui Lian YOON, David BURGER, Ellis PENNING, Harm DUEL and Esther CLEWS

- O16 6:10 pm Speciation of aquatic insects in adaptation to environmental profiles
in streams
Tuyen Van NGUYEN, Dong-Hwan KIM, Rupert MAZZUCCO, Ulf
DIECKMANN and Tae-Soo CHON

5:10 pm – 6:25 pm, Room 304

General Session 3

Behavior and Physiology

Chair: Hongqu TANG and Mi-Young SONG

- O17 5:10 pm Salinity effects on the expression of metabolic/development and
immune related genes in an intertidal mud crab
Macrothalmus japonicus
Chamilani NIKAPITIYA and Ihn-Sil KWAK
- O18 5:25 pm Development of species sensitivity distributions and estimation of HC5
of metals and metalloids with different approaches
Yuedan LIU, Fantang ZENG, Fengchang WU and John P. GIESY
- O19 5:40 pm Behavioral analysis of an Oligochaete, *Lumbriculus variegatus*, treated
with toxic substances at low concentrations
Chang Woo JI, Young-Seuk PARK, Youngdae CUI, Hongzhu
WANG and Tae-Soo CHON
- O20 5:55 pm Developmental differences of the non-biting midge *Glyptotendipes*
tokunagai (Diptera: Chironomidae) during the successive rearing of
forty-two generations over seven years
Min Jeong BAEK, Tae Joong YOON, Hyo Jeong KANG and Yeon
Jae BAE
- O21 6:10 pm Inferring movement data structure of zebrafish (*Danio rerio*) under
stressful conditions
Hungsoo KIM, Tuyen Van NGUYEN, Quang Kha QUACH, Takashi
UEHARA, Muyoung HEO, Tae-Soo CHON

6:40 pm, SangNam International House

Dinner

June 6, 2014 (Friday)

9:00 am – 9:50 pm, Grand Hall
Plenary Talk

Jane M. HUGHES

Chair: Yong-Jin WON

9:50 am – 12:10 pm, Grand Hall

**Special Session 2 Use of Molecular Genetics in Studies of Ecology,
Evolution, and Taxonomy**

Chair: Kozo WATANABE

- O22** 9:50 am Comparison of genetic structures between two closely related burrowing mayflies, *Ephoron eophilum* and *Ephoron shigae* (Ephemeroptera; Polymitarcyidae), in East Asia
Kazuki SEKINÉ, Koji TOJO and Yeon Jae BAE
- O23** 10:05am Evidence for contemporary migration and interspecific introgression in a small-bodied freshwater fish, *Squalidus multimaculatus*.
**Ho Young SUK, Yoon Jeong LEE, Hyung-Bae JEON,
Dong-Young KIM and Han-Gyu BAE**
- O24** 10:20am Genomic replacement of native *Cobitis lutheri* with introduced *C. tetralineata* through a hybrid swarm following the artificial connection of river systems
Ye-seul KWAN, Myeong-Hun KO and Yong-Jin WON

10:35 pm – 10:50 pm, Lobby and Lounge

Coffee and Tea Break

- O25** 10:50am Molecular ecotoxicology approach for adverse outcome pathway in aquatic midge, *Chironomus riparius*
Jinhee CHOI
- O26** 11:05am Applying self-organizing map in AFLP data analysis in aquatic insects
Bin LI, Kozo WATANABE, Heui-Soo KIM and Tae-Soo CHON
- O27** 11:20am DNA-based assessment of species richness of stream macroinvertebrate community using next generation sequencing
Kozo WATANABE, Kohsuke IZUMI, Yo MIYAKE and Maribet GAMBOA
- O28** 11:35am Assessing biodiversity of stoneflies (Plecoptera) using mitochondrial and nuclear DNA
Maribet GAMBOA, Kozo WATANABE, Yasuhiro TAKEMON and Michael T. MONAGHAN
- O29** 11:50am Using molecular scatology to identify aquatic and terrestrial prey in the diet of a riparian predator
Ming-Chih CHIU, Choon Kiang WONG, Yuan-Hsun SUN and Mei-Hwa KUO

12:05pm

Conclusion
Kozo WATANABE

**12:10 pm – 1:30 pm, SangNam International House
Lunch**

**1:30 pm – 2:20 pm, Grand Hall
Plenary Talk**

Mutsunori TOKESHI

Chair: Young-Seuk PARK

2:20 pm – 3:35 pm, Grand Hall

General Session 4

Systematics and Biodiversity I

Chair: Xinhua WANG

- O30** 2:20 pm Taxonomic revision of the Korean Elmidae (Coleoptera: Dryopidea) with descriptions of four new species
Sang Woo JUNG, Manfred A. JÄCH and Yeon Jae BAE
- O31** 2:35 pm Emergence patterns of lentic chironomids collected from 5 ponds in Macau
Jie LIU, Hongu TANG, Jian-Gang ZHAO, Kai-Chin WONG, Man Cheng CHOI and Zhi-Qiang LI
- O32** 2:50 pm Confirmation of the immature stage of *Microchironomus tabarui* using mitochondrial COI and discussion on the systematic position (Diptera, Chironomidae)
Honggu TANG, Jingyi CHEN, Enlou ZHANG and Huabing LI
- O33** 3:05 pm DNA taxonomy reveals species diversity of chironomidae (Diptera) in a semi-natural river in the Alps
Shunsuke KONDOH, Xavier-Francois GARCIAA, Yasuhiro TAKEMON, Klement TOCKNER, Michael T. MONAGHAN and Kozo WATANABE
- O34** 3:20 pm Taxonomic review of the non-biting midge genus *Chironomus* (Diptera: Chironomidae) in Korea using mitochondrial COI gene sequences
Hyo Jeong KANG, Kyeong In SUH, Han Il REE and Yeon Jae BAE

3:40pm – 4:20 pm, Multipurpose Hall

Poster Session

4:20 pm – 5:20 pm, Grand Hall

General Session 5

Systematics and Biodiversity II

Chair: Koji TOJO

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- O35** 4:20 pm The Chinese mayflies in the genus *Vietnamella* (Ephemeroptera: Vietnamellidae)
Chang-Fa ZHOU
- O36** 4:35 pm The phylogeography of Japan's endemic dipteromimid mayflies, which inhabit the upper headwaters of rivers (Insecta, Ephemeroptera, Dipteromimidae)
Masaki TAKENAKA and Koji TOJO
- O37** 4:50 pm Phylogeography of *Isonychia japonica* (Ephemeroptera; Isonychiidae) with a wide distribution in East Asia
Rie SAITO and Koji TOJO
- O38** 5:05 pm Historical review of the Hydropsychidae (Trichoptera) in tropical Southeast Asia with descriptions of new species
Christine Jewel C. UY and Yeon Jae BAE

4:20 pm – 5:20 pm, Room 304

General Session 6

Systematics and Biodiversity III

Chair: Konstantin A. LUTAENKO

- O39** 4:20 pm The molecular phylogeography of the balitorid loach *Oemacheilus barbatulus* in East Asia: new evidence to overturn the previously established phylogeographic model
Kensuke KOBAYASHI and Koji TOJO
- O40** 4:35 pm Multilocus phylogeny of the freshwater fish family Cobitidae (Cypriniformes: Teleostei) from Korea
Ye-seul KWAN, Myeong-Hun KO, Won-Ok LEE and Yong-Jin WON
- O41** 4:50 pm A list of Myanmar caddisflies (Trichoptera) including newly collected data
Wityi HNIN, Takao NOZAKI and Takeshi FUJINO
- O42** 5:05 pm Biogeographic status of the eastern coast of South Korea based on bivalve mollusks
Konstantin A. LUTAENKO

5:20 pm – 6:20 pm, Grand Hall

General Session 7

Population and Community Dynamics

Chair: Ihn-Sil KWAK

- O43** 5:20 pm Weekly population change of adult Trichoptera *Dipseudopsis robustior* and *Macrostemum floridum* in Chiang Mai Zoo, Thailand
Decha THAPANYA and Watchapon KONGKARNKA
- O44** 5:35 pm Macrozoobenthos communities of the streams of the Western Sayan Mts.
Natalia S. BATURINA

O45 5:50 pm Species diversity and abundance of adults trichoptera
in tributary stream of the MaeNgat Sombonchol dam,
Chiang Mai province, Thailand

Wongphan PROMWONG and Decha THAPANYA

O46 6:05 pm Effects of drought disturbance on benthic macroinvertebrate
communities in experimental mesocosm wetlands
**Dong Gun KIM, Cha Young LEE, Lak Joong CHOE, HyoJeong
KANG, Min Jeong BAEK and Yeon Jae BAE**

5:20 pm – 6:55 pm, Room 304

Workshop Key to The Tropical Southeast Asian Aquatic Insects

Chair: Yeon Jae BAE and John MORSE

5:20 pm

Introduction

Yeon Jae BAE

W1 5:25 pm Key to the species of Ephemeroptera families Baetidae, Behningiidae,
Heptageniidae, Isonychiidae, and Oligoneuriidae
in tropical Southeast Asia

Boonsatien BOONSOONG

W2 5:40 pm Key to the species of Ephemeroptera families Austremerellidae,
Caenidae, Ephemerellidae, Neophemeridae, Prosopistomatidae,
Siphuriscidae, Teloganellidae, Teloganodidae, Leptophlebiidae,
Polymitarcyidae, Potamanthidae, and Ephemeridae
in tropical Southeast Asia

Van Vinh NGUYEN

W3 5:55 pm Key to the tropical Southeast Asian Plecoptera

Thi Kim Thu CAO

W4 6:10 pm Key to the genera of Trichoptera in Oriental Asia

John MORSE

6:30 pm

Discussion & Closing Remarks

John MORSE

7:00 pm, SangNam International House

Banquet

Poster Presentation

Session 1 Biological Monitoring and Assessment

- P01 Comparisons of fish community composition according to the differences of geographic regions in Korea
Mi-Young SONG, Jung-Ik BAEK, Seung-Yoon JUNG, Kyeong-Hwan KIM and Wan-Ok LEE
- P02 Ecological composition and distribution of the diatoms in the Mudeungsan national park
Hyeon Jin CHO, Hee Sung KIM, Dong Won KANG and Hak Young LEE
- P03 Biological water quality assessment using benthic diatoms in the Boseong river
Hyeon Jin CHO, Hee Sung KIM, Myung Hwa JUNG and Hak Young LEE
- P04 Bioassessment of Vladivostok city and its vicinities streams by the classic chemical and microbiological methods together with biological and nuclear magnetic spectroscopy (NMS) methods (Primorye, Russian Far East)
Tatyana S. VSHIVKOVA, L. A. MEDVEDEVA, L. S. BUZOLEVA, N. K. KHRISTOFOROVA, L. T. KOVEKOVDVA, N.V. POLYAKOVA and Konstantin A. DROZDOV
- P05 After-effects of Tsunami on distribution of mosquitoes in the suburbs of Sendai City in Miyagi Prefecture, Japan in 2013
Kimio HIRABAYASHI, Masaaki TAKEDA and Yoshio TSUDA
- P06 Longitudinal variation of benthic macroinvertebrate indices in Seomjin river
Woon-Seok CHO, Byung-Hyun LIM, Soo-Hee KIM and Ihn-Sil KWAK
- P07 The assessment of water quality on bioaccumulation of heavy metals in caddis larvae of *Rhyacophila* (Trichoptera: Rhyacophilidae) in natural and anthropogenic transformed streams.
Olga K. KLISHKO and Tatyana S. VSHIVKOVA
- P08 Expressions of antioxidant genes in the intertidal mud crab, *Macrophthalmus japonicas*, exposed to perfluorooctane sulfonate (PFOS)
Ki Yun PARK and Ihn-Sil KWAK
- P09 Benthic macroinvertebrate assemblages as key indicators of water quality in Pong and Cheon Rivers, Northeastern Thailand
Kannika SIRISINTHUWANICH and Narumon SANGPRADUB

Session 2

Conservation and Management

- P10** An introduction to the tropical pond habitat survey
**Yong Tze HO, Hui Lian YOON, Xue Ying ENG, Rop Fun QUEK and
Esther CLEWS**
- P11** Intensive study on radioactive cesium contamination and evaluation of
biological half-life of *Stenopsyche* (Trichoptera: Stenopsychidae)
**Shota KOBORI, Eri MIYAZAKI, Wityi HNIN, Takeshi FUJINO, Mamoru
SAKAI and Takashi GOMI**
- P12** Diatom algae of the Lower Amur River (Russia)
Tatiana V. NIKULINA
- P13** Some data on reproductivity and morphology of glochidia of Asian
freshwater bivalves from genus *Sinanodonta* (Unionidae: Anodontinae)
Elena M. SAYENKO

Session 3

Molecular Biology

- P14** DNA barcode library for Korean Ephemeroptera
Yeon Jae BAE, Jeong Mi HWANG, Kyong In SUH and Won Young CHOI
- P15** Population genetic structuring of short ninespine stickleback (*Pungitius
karibarae*)
Han-Gyu BAE and Ho Young SUK
- P16** Phylogeographic exploration of *Gobioid* fishes based on 12S ribosomal
RNA sequences
Hyung-Bae JEON and Ho Young SUK
- P17** Molecular phylogeography of East Asian ephemerid mayflies, genus
Drunella and *Cincticostella* (Insecta: Ephemeroptera, Ephemerellidae)
Jaeick JO and Koji TOJO
- P18** Molecular phylogeography of the headwater-specific alpine caddisflies,
Pseudostenophylax spp. (Insecta: Trichoptera, Limnephilidae)
Kenji MIKAMI, Takao NOZAKI and Koji TOJO
- P19** Comparative analysis of salivary gland proteins in *Anopheles gambiae* and
Drosophila melanogaster (Diptera) using Hidden Markov Models
**Thao Thi NGUYEN, Tuyen Van NGUYEN, Dong-Hwan KIM,
Sang-Bin LEE, Young-Su SEO and Tae-Soo CHON**

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P20 Comparing the population structure and genetic diversity patterns of *Isonychia japonica*, along river in the Chikuma-Shinano River Basin (Insecta, Ephemeroptera, Isonychiidae)

Rie SAITO and Koji TOJO

P21 Molecular phylogenetic analyses of diptemomimid mayflies and its relevance to geohistory: Geological isolation by plate tectonic lines, mountain formation, and stream piracy (Insecta, Ephemeroptera, Dipteromimidae)

Masaki TAKENAKA and Koji TOJO

Session 4

Population and Community Dynamics

P22 Recovery dynamics of benthic macroinvertebrate community after the stream rest year system and restoration project at Ui creek of Seoul, Korea
Kyung-Seok BAE, Hae-Kyung GIL and Gui-Cheol LIM

P23 Comparison of aquatic insect diversity between tropical Cambodian and temperate Korean freshwaters
Jun Shik BAE, Dong Gun KIM, Christine Jewel C. UY, Polin SIN and Jeong Mi HWANG

P24 Spatio-temporal population growth of toxin producing and sensitive species in allelopathy
Sung-Tae KIM, Hungsoo KIM, Tuyen Van NGUYEN, Sang Hee LEE and Tae-Soo CHON

P25 Application of Self Organizing Map (SOM) to patterning macroinvertebrate communities across different level of pollution in Japan and Korea
Dong-Hwan KIM, Yu ISOBE, Jung-Sub LIM and Tae-Soo CHON

P26 Habitat preference of tropical freshwater macroinvertebrates
Li Yun TAN, Rop Fun QUEK and Esther CLEWS

Session 5

Systematics and Biodiversity

P27 Phylogeography of *Palaeagapetus* (Trichoptera: Hydroptilidae) in East Asia
Rirei ARAIYA, Tomiko ITO and Koji TOJO

P28 Phoretic relationship between larvae of *Nanocladius* (Plecoptera: Coluthus) *Asiaticus* Hayashi (Diptera, hironomidae) and *Gestroiella* spp. (Heteroptera, Naucoridae), *Euphaea masoni* (Odonata, Euphaeidae) in Kanchanaburi province (western Thailand)
Boonsatien BOONSOONG

- P29** Leaf type used for larval case building in a caddisfly (*Anisocentropus kawamurai*) in forest streams of Aya, Miyazaki, Japan
Yumiko HAYASHI, Kozo KAWANO, Noriyuki KUSHIMA and Tetuo MURAKAMI
- P30** The genus *Hydroptila Dalman* (Trichoptera, Hydroptilidae) in the Ryûkyû Islands, southwestern Japan
Tomiko ITO
- P31** A new species of the genus *Adicella McLachlan* (Trichoptera, Leptoceridae) from Japan
Nobuyuki KATSUMA and Eiji YAMAMOTO
- P32** The Genus *Ecnomus* (Trichoptera: Ecnomidae) in Singapore
John C. MORSE
- P33** Primary seta no. 18 of larval head of *Stenopsyche* species (Trichoptera, Stenopsychidae)
Takao NOZAKI and Noriyoshi SHIMURA
- P34** The genus *Goera Stephens* (Trichoptera: Goeridae) in Korea: A preliminary report
Sun Jin PARK, Min Woo OH and Dongsoo KONG
- P35** The check-list of the amphibiotic insects (Insecta: Ephemeroptera, Plecoptera, Trichoptera) of the Sikhote-Alin Biosphere Reserve and adjacent territory
Elena V. POTIKHA
- P36** Chironomid larvae in the Pong River, Thailand
Em-on SRIARIYANUWATH and Narumon SANGPRADUB
- P37** First record of *Esakia latonota* Duc and Zettel (Hemiptera: Heteroptera: Gerridae) in Thailand, with a note on the distribution of the genus in Oriental region
Benjamart SUKSAI and Narumon SANGPRADUB
- P38** The “character displacement” between two closely related giant water bugs, each in the Korean Peninsula and the Japanese Archipelago (Insecta: Heteroptera, Belostomatidae)
Tomoya SUZUKI and Koji TOJO
- P39** Review of the genus *Rheocricotopus* Thienemann & Harnisch from China (Diptera: Chironomidae, Orthoclaadiinae)
Xinhua WANG and Wenbin LIU
- P40** A review on taxonomy of Atyidae (Crustacea: Decapoda) in China
Ruilei ZHANG

Session 6

Behavior and Physiology

- P41 Predation of the *Hydrochara affinis* (Coleoptera: Hydrophilidae) larvae on two mosquito species, *Culex pipiens molestus* and *Ochlerotatus togoi*, under laboratory conditions
Hak Myeong BAEK, Dong Gun KIM, Min Jeong BAEK, Cha Young LEE, Hyo Jeong KANG, Myeong Chul KIM, Kyung Seok BAE and Yeon Jae BAE
- P42 Association of nymphs and adults of odonates (Insecta, Odonata) in headwater streams of the Phachi River, Ratchaburi province, Thailand
Damrong CHAINTHONG and Boonsatien BOONSOONG
- P43 Quantification of the interaction for the individual fish using a mirror wall
Muyoung HEO, Quang kha QUACH and Tae-Soo CHON
- P44 Understanding behavioral responses of zebrafish by means of path analysis using shape parameters of positional distribution under chemical stress
Kwang Sung LEE, Hungsoo KIM, Quang Kha QUACH and Tae-Soo CHON
- P45 Self-organizing map applied to movement behavior of zebrafish (*Danio rerio*) in response to infection by *Edwardsiella tarda*
Sang-Bin LEE, Yunjeong CHOE, Ho Young KANG and Tae-Soo CHON
- P46 Movement behaviors of Zebrafish (*Danio rerio*) in different area and size of observation arena
Quang Kha QUACH, Hungsoo KIM and Tae-Soo CHON
- P47 The differensis in the pallial oviduct structure of the mollusks of Semisulcospiridae family (Gastropoda; Cerithioidea) from Korea
Anna V. RASSHEPKINA

Excursion: Hobakso Pond and Pyochungsa Temple

- Meeting place for departure: In front of SangNam International House
(Please check the campus map on the last page.)
- Departure time: 9:00 am on June 7 (Saturday)
- Travel time : around 3 hours by the tour bus (round trip)
- Lunch box and water will be offered by LOC.
- Sampling facilities will be provided by LOC.
- Any participant with health problem (e.g., motion sickness) should report to
LOC or excursion manager.

Major species at the sampling site near Hobakso Pond



Cincticostella levanidovae
Tshernova



Oyamia coreana



Rhyacophila nigrocephala

Excursion Manager: Sang-Bin LEE
E-mail: lsb5162@pusan.ac.kr
Phone: (+82) 010-4858-5162

Hobakso Pond



Hobakso Pond (“호박소”) sits on the hillside of the 885 meter-high Mt. Baekunsan (“백운산”) located in Milyang, Gyeongnam Province. The pond is located at the base of a 10-meter-high waterfall and is named after Hobak, a grain-grinding tool. The circumference of the pond is around 30 meters and 6 meters in depth. In the olden days, the pond was a spiritual place where people would pray for rain. Surrounded by white granite rocks, the area is a scenic place of natural beauty. Visitors can also look around nearby Baengnyeonsa Temple, Hyeongjeso Pond, and Ocheonpyeong Rock.

<http://english.visitkorea.or.kr/>

Pyochungsa Temple



Pyochungsa Temple (“표충사”) is located at the base of Jaeyaksan Mountain (“재약산”), 20 kilometers away to the east of Miryangsi. The temple was built in the fourth year of King Heungdeok’s reign of the Silla Kingdom (829). It was named as ‘Pyochungsa’ to praise Samyeongdang who played an important role in the peace envoy during the invasion of Japan. There are the scenic places such as Cheungcheung Falls, Geumgang Falls, and Sajapyeong field at the ridge of the mountain.

<http://english.visitkorea.or.kr/>

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General Information

Automated Teller Machines (ATMs)

You will find ATMs on nearly every street corner or in convenience stores.

BUSINESS HOURS

For most government and private offices, business hours are from 9 am to 6 pm, Monday to Friday. Banking hours are from 9 am to 4 pm, Monday to Friday. Operating hours for ATMs vary, and are written usually on the machine. Please note that they are not generally open 24 hours. Post offices are open from 9 am to 6 pm, Monday to Friday.

CURRENCY

The unit of Korean currency is the Won(₩). Coin denominations are ₩10, ₩50, ₩100, and ₩500. Banknotes are ₩1,000, ₩5,000, ₩10,000, and ₩50,000.

- Currency exchange: Foreign banknotes and traveler's check can be exchanged at foreign exchange banks and other authorized money changers.
- Credit cards: Visa, American Express, Master Card and Diners Club are widely accepted at major hotels, shops and restaurants. Check with your credit card company for details of merchant acceptability and other services for their availability in Korea.
- Traveler's check: Accepted, but may be difficult to change in small shops. To avoid additional exchange rate charges, travelers are advised to bring Traveler's checks in US Dollars.

ELECTRICITY

In Korea, 220 volt outlets are usual. Always check the power supply before using your equipment.

EMERGENCY TELEPHONE NUMBERS

112: Police

119: Emergencies for Fire / Rescue & Hospital Services

LOCAL TIME

Korea standard time zone is GMT +9 hours.

SMOKING

Smoking is prohibited inside the buildings in all public places in Korea.

TELEPHONE CALLS

For international calls, first dial the international dial code (001, 002, or 00700), then the country code, followed by the area code excluding first zero, then the phone number.

Congress Information

REGISTRATION DESK

- Please visit the registration desk to complete your payment and to receive your name badge.
- Place: Grand Hall, 3F (Main Administration Building, PNU)
 - * For finding locations, please check the map on the facing page.
- Operation Hours: June 5, 10:00 am – 5:00 pm / June 6, 8:00 am – 4:00 pm

MESSAGE BOARD

- A board will be available for receiving information from LOC and for communication between participants. Participants are welcome to use the board.
- Place: Grand Hall, 3F (Main Administration Building, PNU), Next to the Information desk

RESTAURANT FOR LUNCH, DINNER, AND BENQUET

- Place: SangNam International House, 1F (PNU)
 - * For finding locations, please check the map on the facing page.