



DIWPA News Letter

No.18

DIWPA International Symposium Successfully Held

The DIWPA International symposium "Perspectives of the Biodiversity Research in the Western Pacific and Asia in the 21st Century" was successfully held in Kyoto on December 18-19, 2003. The symposium drew quite a number of participants from many countries (97 people from 14 countries) including students and senior researchers of various disciplines. The symposium had the following four sessions: 1) International Partnerships in Biodiversity Research, 2) Progress and Perspectives of the DIWPA-IBOY, 3) Carbon and Biodiversity, and 4) Landscape Conversion and Biodiversity.

This symposium was organized to address the new direction in biodiversity research in the 21st Century. We are facing to unprecedented serious global-change problems. Human beings will be increasingly constrained in resource- and land-use by global-change problems, among which the loss of biodiversity is most serious. We will need to adopt a new societal system to achieve a truly sustainable development. In order to accomplish such a societal system, scientists are charged to predict the effects of global changes on the earth system. Can biodiversity scientists improve the predictive capacity and participate the partnership with the scientists of the other disciplines? The overall goals of the symposium were to ask each participant to think how we could improve the capacity to predict the consequences of the loss of biodiversity on the globe system, and to propose new unifying projects.

In the first session (International Partnerships in Biodiversity Research), Dr. Anne Larigauderie spoke to us about the scopes and new core programs of the international program, DIVERSITAS. Subsequently, Dr. Hassan Virji of START explained the very recent development of the major global research programs. The major global research programs (IGBP, IHDP, WCRP) and DIVERSITAS formed a partnership called "the Earth System Science Partnership (ESSP)." The international program START in response to the ESSP's request is going to initiate an integrated regional study in Mon-

soon Asia (MAIRS). Monsoon Asia has been identified as a critical region for the global system. This region corresponds to the home ground of DIWPA. START has identified several research themes in Monsoon Asia, among which "ecosystem change and biodiversity loss" is central to designing specific activities/implementations. These two presentations set forth the direction of the symposium; how DIWPA could join ESSP-MAIRS and contribute in predicting the effects of ecosystem change and biodiversity loss.

In the second session, the coordinators of each of the four ecosystem groups (forest, fresh water, coastal marine and island) reported the progress of IBOY. This session was held not only to report the IBOY progress but also to ask if we could apply our methodologies to the other projects such as MAIRS.



The third and fourth sessions proposed "Carbon and Biodiversity" and "Landscape Change and Biodiversity" be the new core areas for the next DIWPA unifying project. Participants from USA, Malaysia and Japan presented how we could achieve the triple benefits of biodiversity conservation, carbon sequestration and community participation, particularly in tropical rain forests. The need of good research in the dynamics of carbon and the role of biodiversity was pointed out. In the session of "Landscape Change and Biodiversity," participants from USA, Japan, Sri Lanka, and Malaysia presented various case studies. In this session, the

importance of traditional landscapes in biodiversity conservation was particularly emphasized. Also, the interactions of ecosystems thru trophic linkages in a given landscape, the role of earthworms in ecosystem functions, and the consideration of the size and number of reserves in ecosystem management were introduced and these stimulated the interests of participants. The latter three sessions were closely related to the three core areas of DIVERSITAS and this affirmed that the direction of DIWPA was in line with the DIVERSITAS scientific plan.

In between sessions, posters were displayed. The program and abstracts of the symposium are being reported at the DIWPA website. Also, thanks to the courtesy of the participants, Powerpoint slides are also being displayed at the website. Those who have missed the symposium are welcome to visit the DIWPA website <http://diwpa.ecology.kyoto-u.ac.jp/symposium/symposium-program.htm> and refer to the papers. Please contact the authors should you want to cite the Powerpoint materials.

Reported by K. Kitayama (Secretary General)

Minutes of the 4th DIWPA Steering Committee Meeting

Met at Kyodai Kaikan, Kyoto,
13:15-15:00,
December 20, 2003
Chaired by Hiroya Kawanabe

Steering Committee Members Present:

Keping Ma, Chang-Hung Chou, Arie Budiman, In Kyu Lee, Miguel Fortes, Oleg Timoshkin, Yuri Zhuravlev, Channa Bambaradeniya, Dieter Mueller-Dombois, Ying Fah Lee (in place of Maryati Mohamed)

Observers:

Anne Larigauderie, Trong Hung Dao, Toshio Iwakuma

Secretaries:

Kanehiro Kitayama, Tohru Nakashizuka, Toshi Nagata, Takakazu Yumoto, Tatsuyuki Seino, Tomoko Nishino

Minutes

1. The DIWPA Office (Kitayama) reported the activities relating to newsletters and web site. Also reported was the structure of the IBOY database.
2. The DIWPA Office (Yumoto) briefed the schedule of the next DIWPA International Field Biology Course (G. Halimun National Park, Java, Indonesia; Jan. 2004). Toshi Nagata explained the related activities in Lake Biwa to be conducted in 2004. Dieter-Mueller-Dombois reported that the PABITRA Field Biology Course was conducted in Fiji (2002) and Samoa (2003). Channa Bambaradeniya reported that a field biology course was conducted in collaboration with DIWPA in Sinharaja, Sri Lanka in 2003.
3. The DIWPA Office (Kitayama) explained the need of a data clearing-house mechanism for DIWPA-IBOY. Also explained the tentative measure to house DIWPA-IBOY data at the Secretary Office and data-management guidelines (draft guidelines were distributed).
4. The DIWPA Office (Kitayama) explained the need of summarizing the preliminary results of DIWPA-IBOY and proposed to produce a leaflet as a first step. This proposal was unanimously approved.
5. Anne Larigauderie explained that the first DIVERSITAS Open Science Conference would take place in Mexico in November 2005. DIWPA will be invited to send a representative to the meeting of all DIVERSITAS National Committees.
6. The following three projects were proposed, and DIWPA unanimously approved to promote these as the post-IBOY DIWPA projects.

Carbon and biodiversity:

DIWPA recognizes the need of holistic approach to achieve both the conservation of biodiversity and global-change mitigation in harmony. DIWPA also recognizes the need of a cross cutting project thru DIVERSITAS, WCRP, IHDP and IGBP and the project "carbon and biodiversity" can serve as a regional pilot case. DIWPA will participate the Sabah State Forestry Project in Deramakot, Sabah, Malaysia, where the triple benefits are sought in the conservation of biodiversity, climate mitigation and sustained yield. Kanehiro Kitayama was appointed as the project coordinator.

Landscape-change and biodiversity:

DIWPA recognizes that landscape-change and biodiversity-loss are the two major issues in the Western Pacific and Asia, which may have significant global consequences as well as lead to the loss of our traditional integrated human-nature systems. The influences of the loss of biodiversity may be transmitted thru parts of a landscape to local to regional to global systems via biological actions and reactions unique to the biota. A regional collaborative project is sought to investigate the patterns and driving forces of a change, and the ecological and anthropogenic impacts to develop a future scenario and the landscape planning and management tools in terms of biodiversity. A drafting team to write up a collaborative-project proposal and to identify funding agencies is formed (the list of drafting team is attached below). Tohru Nakashizuka was appointed as the project coordinator.

Biodiversity monitoring:

DIWPA recognizes the need of biodiversity monitoring in many countries in the Western Pacific and Asia. This activity is in line with the DIVERSITAS's strategy of jointly promoting monitoring activities such as the Global Terrestrial Observing System (GTOS).

7. The proposal of DIWPA Office (Kitayama) to partici-

pate the 7th meeting of the conference of the parties of the Convention on Biological Diversity (CBD COP7) in Kuala Lumpur, Malaysia, Feb. 2004 was approved.

8. Tohru Nakashizuka was unanimously elected as the new chairperson of the DIWPA to succeed Hiroya Kawanabe as of December 20, 2003. He will serve for a 3-year term. Kanehiro Kitayama was elected to continue to serve as Secretary General. Shoko Sakai was newly elected to serve as a Secretary for Planning and Operation (Newsletter) and Public Education.

Drafting team for the "Landscape-change and biodiversity" project

Oleg Timoshkin et al. (lake)
Toshio Iwakuma (watershed)
Xie Ping (river)
Ma Keping (temperate region)
Waidi Sinun & Soetikno Sastroutomo (SE Asia)
Channa Bambaradeniya (S Asia)
T. Ch Maximov (Boreal)
Dao Trong Hung (Indochina)
Dieter Mueller-Dombois (Polynesia)
Miguel Fortes (mangrove & seagrass)
Chou Cheng Hung (subtropical region)

Drafted by K. Kitayama

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► Report:

DIWPA/IBOY the 7th International Field Biology Course Held

The Course was held during 19 to 28 January, 2004, in Division of Zoology, Research Center for Biology - LIPI, Cibinong, Bogor and at Cikaniki Research Station, Gunung Halimun National Park (GHNP) in Indonesia, under the cooperative sponsorship between Research Center for Biology - LIPI and The 21st Century Center of Excellence (COE) Programs in Kyoto, Hokkaido and Kanazawa Universities.

In order to reach the goal of the International Biodiversity Observation Year (IBOY) program in DIWPA, it is necessary to build the capacity in the area of taxonomy. The course was conducted to train students, technicians, biodiversity researchers or environmental managers as parataxonomists for major orders of insects,

focusing on Coleoptera and Hymenoptera this year, under the auspices of DIWPA-IBOY.



A total of 17 trainees (15 Indonesians and 2 Japanese) participated the course:

Narti Fitriana, S. Si. (Department of Biology, Andalas University, Padang)
 Agus Salim, S. Si. (Department of Biology, Pakuan University, Bogor)
 Ir. Nur Faizin (GHP: Gunung Halimun National Park).
 Ika Kristiana Widyaningrum, S. Si (GHP).
 Christopher Yanto, S. Si. (ITB: Bandung Institute of Technology).
 Lies Annisa, S. Si. (ITB)
 Nety Virgo Erawati, S. Si. (Research Center for Biology - LIPI)
 Rofik Sofyan (Research Center for Biology - LIPI)
 Cahyo Rachmadi, S. Si. (Research Center for Biology - LIPI)
 Lilik Kunder Setyadi (Research Center for Biology - LIPI)
 John Leonardi Laisnima, M. Si. (Faculty of Biology Satya Wacana Christian University, Salatiga).
 Dr. Agna Suliskrave (Faculty of Biology Satya Wacana Christian University, Salatiga).
 Ir. Fizrul Indra Lubis (PT London Sumatra, Medan)
 Ir. Sri Hadiyani, MS. (Balai Penelitian Tanaman Tembakau dan Serat, Malang).
 Dra. Wida Darwati (Research Center for Forestry and Nature Conservation, Bogor).
 Midori Kidokoro (Hokkaido University, Japan)
 Kohei Takenaka (Hokkaido University, Japan)

They took two 3-day courses for Coleoptera and Hymenoptera. In each course, they had a lecture about the taxonomy of each order, learned how to make pinned specimens and genitalia preparation, identified specimens collected by IBOY sampling at GHP to the family level, using traditional dichotomous and computer-aided multiple-entry keys, and learned how to construct a digital-image database of insect specimens. The two courses were guided by the following lecturers and assistants:



Coleoptera course

Masahiro Ohara (Principal lecturer; Hokkaido University, Japan)
 Koji Mizota (Associate lecturer; Miyagi University of Education, Japan)

Piotr Wegrzynowicz (Assistant; Museum and Institute of Zoology, Polish Academy of Sciences, Poland)
 Munetoshi Maruyama (Assistant; The National Science Museum, Japan)

Hymenoptera course

Seiki Yamane (Principal lecturer; Kagoshima University, Japan)
 Jaitrong Weeyawat (Assistant; National Science Museum, Thailand)
 Hasin Sasitron (Assistant; Kasetsart University, Thailand)



Both courses

Shinsaku Koji (Assistant; Kanazawa University, Japan)
 Hideki Kagata (Assistant; Kyoto University, Japan)

Furthermore, the participants attended a 2-day field-work course in GHP to practice various methods of insect sampling under the guidance of the following lecturers:

Sih Kahono (Research Center for Biology - LIPI)
 Rosichon Ubaidillah (Research Center for Biology - LIPI)
 Woro A. Noerdjito (Research Center for Biology - LIPI)
 Awit Suwito (Research Center for Biology - LIPI)
 Tati S. Subahar (ITB)

In addition to these practical courses, the participants had the following lectures:

Introduction of "IBOY", by Masanori J. Toda (Hokkaido University, Japan)
 Protocol of IBOY sampling manual, by Tati S. Subahar (ITB)
 Introduction to insect systematics, by Djunijanti Peggie (Research Center for Biology - LIPI)
 IBOY database, by Masanori J. Toda (Hokkaido University, Japan)
 Diversity of sexual dimorphism and speciation by sexual selection, by Norio Yamamura (Kyoto University, Japan)
 Ecology of termites, by Ichiro Tayasu (Kyoto University, Japan)

Lastly, all participants wrote their reports about what they learned in the course and answered a questionnaire from the Organizing Committee. Referring to their reports and answers, the Committee (see below for the members) has decided to continue similar DIWPA taxonomy-training courses for three more years under the co-sponsorship between Research Center for Biology - LIPI and the three COE Programs in Japanese Universities: the next course will be held also at Cibinong, Indonesia in December, 2004, inviting participants more widely, especially from Southeast Asian countries and regions.

Please visit the following web site for the details and the insect digital-image library compiled in DIWPA/IBOY the 7th International Field Biology Course: <http://www.museum.hokudai.ac.jp/activity/IBOY2004/index.html>

The Organizing Committee

Indonesia

Research Center for Biology - LIPI

Sih Kahono (Chief)

Woro A Noerdjito

Rosichon Ubaidillah

Bandung Institute of Technology

Tati S. Subahar

Gunung Halimun National Park

Koeswandono

Japan

Research Institute of Humanity and Nature, and
Kyoto University

Takakazu Yumoto (Chief)

Hokkaido University

Haruo Katakura

Masanori J. Toda

Kanazawa University

Koji Nakamura

Reported by M. Toda (Hokkaido Univ.)

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► **Announcement:**

International Field Biology Course 2004

Lambir Hills National Park, Sarawak, Malaysia

The Center for Tropical Forest Science - Arnold Arboretum (CTFS-AA) Asia Program in Tropical Forests of Asia in collaboration with DIWPA and the Center for Ecological Research, Kyoto University will run its third International Field Biology Course from July 15 - August 15, 2004 at Lambir Hills National Park in Sarawak, Malaysia. The course is hosted by the newly constituted Sarawak Forest Corporation (SFC), Kuching, Sarawak, Malaysia.

Lambir Hills National Park has gained international fame as one of the most species-rich forests in the world with regard to trees. The CTFS-AA 52-ha permanent forest plot at Lambir includes over 1100 species of trees. Forest research at Lambir, which began in the 1960s, also includes a canopy biology program sponsored through SFC and Kyoto University. These long-term programs have made Lambir one of the best studied forests in Borneo.

The course will be aimed at graduate entry level students and will provide a broad-based introduction to the ecology of tropical forests in SE Asia. The course

will include a strong practical element and students will learn to develop their own research ideas in both group and individual projects. Students will analyze their data and present their results in both oral and written reports. The course will be taught by local and international researchers who are experts in their respective fields.

Lecturers include:

Dr. Rhett D. Harrison (Smithsonian Tropical Research Institute)

Dr. Stuart J. Davies (Harvard University/CTFS-AA Program)

Dr. Akira Itoh (Osaka City University)

Dr. James V. LaFrankie (Smithsonian Tropical Research Institute)

Mr. Sylvester Tan (Sarawak Forest Corporation)

Dr. Richard Corlett (Hong Kong University)

Dr. Shawn K.Y. Lum, (Nanyang Technological University)

Ms. Wang Luan Keng, (CTFS-AA Program, Nanyang Technological University)

Dr. Tohru Nakashizuka (Research Institute for Humanity and Nature)

Dr. Michiko Nakagawa (Research Institute for Humanity and Nature)

Dr Don Windsor (Smithsonian Tropical Research Institute)
 Dr Bob Stallard (US Geological Service)
 Dr Niel Das (UNIMAS, University of Malaysia, Sarawak)
 Dr Kuniyasu Momose (Kyoto University)
 Dr Jean-Yves Rasplus (Agricultural Research Institute,
 Montpellier)

Course dates: July 15 - August 15, 2004. At the completion of the course, SFC and CTFS-AA will host a 3-day workshop of scientists working at Lambir and the launching of a new book on the Ecology of Lambir Hills. For more details please visit <http://www.ctfs-aa.org>

Cost of the course: US\$ 800 (includes tuition, food, and lodging; airfare not included). Financial support for deserving students is available upon request.

Deadline to apply: April 30, 2004

Applicants should be college graduates at the entry level of post-graduate studies (that is, engaged in a Master's course or 1st year Doctorate candidates) in tropical biology / ecology, WHO ARE EITHER FROM S.E. ASIA or WHO WILL BASE THEIR RESEARCH IN THE REGION. Students will be selected to provide a

broad international representation and preference will be given to those conducting research at CTFS sites.

All lectures will be in English and while no formal proof of English proficiency is required, applicants must have adequate comprehension of spoken and written English to make the course worth their while.

Students should submit by post or preferably email a Curriculum Vitae and a cover letter explaining their research interests and why they wish to join the course. Address your application to:

Dr. Rhett D. Harrison
 Smithsonian Tropical Research Institute
 Unit 0948, APO AA 34002
 Panama
harrisonr@tivoli.si.edu

with a copy sent to :

Dr. Stuart J. Davies
 Harvard University Herbaria
 22 Divinity avenue
 Cambridge, MA USA 02138
sdavies@oeb.harvard.edu

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► **Announcement:**

2004 DIWPA Field Biology Course in Lake Biwa, Japan

"Biodiversity and ecosystem processes in freshwater environments"

Date: 12 Aug - 23 Aug 2004

Coordinated by Center for Ecological Research (CER), Kyoto University

Lake Biwa is a large (surface area, 688 square kilometer; maximum depth, 103 m), ancient lake located in the central part of the Honshu Island, Japan. This lake is one of the biodiversity hotspots of aquatic organisms with the high level of endemism, reflecting 4 million years of its history and environmental complexity. Participants of the "2004 Field Biology Course in Lake Biwa" will learn structure and function of freshwater ecosystems by examining distribution and diversity of plankton, microorganisms, benthic animals and fish in pelagic, profundal and littoral areas of this lake (Part I). The samples collected during the field trip will be ana-

lyzed by the mass spectrometry in order to learn principles and applications of the stable isotope approach in the study of aquatic food web structure and ecosystem functioning (Part II).

Schedule (tentative)

Part I. Freshwater biodiversity and ecological processes
 12 Aug (Thu) - 18 Aug (Wed)

A three day field trip (13 Aug - 15 Aug) will be conducted to visit a wide variety of environments including pelagic, littoral and human-impacted areas. At pelagic sites, students will learn how to measure the physical

and chemical parameters such as temperature, light intensity, dissolved oxygen concentrations and pH in the water column. Samplings will be carried out to collect phyto- and zooplankton, microorganisms and benthic animals. At littoral sites, fish and invertebrates will be collected. During this trip, students and staffs will stay at a Japanese style accommodation at the Okishima Island.

Biological samples collected during the field trip will be examined at CER (16 Aug - 17 Aug) to learn taxonomy and ecology of freshwater organisms. On the final day, each student will give a talk to discuss about ecological implications of his or her results.

Part II. Stable isotope analysis of aquatic food webs
19 Aug (Thu) - 23 Aug (Mon)

Stable isotope ratios have been widely applied to ecological studies. Recent progress of an on-line technique (continuous-flow system) allows us to analyze C and N isotope ratios of more than 70 samples per day. Each student will process the biological samples ob-

tained in the field trip (Part I) and measure the isotope ratios. Lectures (basic knowledge of stable isotopes, application to food web research, etc.), preparation of samples, use of a mass spectrometer, presentation of the results, and discussion among students are included in this course.

The participants of the Field Biology Course should be talented graduate and undergraduate students from the DIWPA region. The 21st Century Center of Excellence program of Kyoto University provides stipends to a limited number of participants to cover part of their expenses for accommodation and travel. Applicants should send a CV, a statement about their interests in the field of ecology and a recommendation letter written by the supervisor by May 15th 2004 to the following address:

Ms. Yuka Ikoma
Center for Ecological Research, Kyoto University
Kamitanakami-Hirano, Otsu 520-2113 JAPAN
Tel & Fax +81-77-549-8239

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