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Habenaria tosarimensis (Endemic Orchid from Java, Indonesia). Photo by Gilang Dwi Nugroho

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ABSTRACT

INTERNATIONAL CONFERENCE ON BIODIVERSITY

SOCIETY FOR INDONESIAN BIODIVERSITY
Surakarta, 18 December 2021



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INTERNATIONAL CONFERENCE ON BIODIVERSITY

SOCIETY FOR INDONESIAN BIODIVERSITY

Surakarta, 18 December 2021

THEME:

**Microbiology to Multiple Industrial and Environmental Application
to Support Sustainable Development and Improve Human Welfare**

SECRETARIAT ADDRESS

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TIME SCHEDULE
International Conference on Biodiversity
Society for Indonesian Biodiversity (SIB)
Surakarta, Indonesia, 18 December 2021

TIME	ACTIVITIES	PERSON IN CHARGE	SITE
Time in Jakarta, Indonesia			
December 18, 2021			
07.30-08.00	Registration	Committee	Lobby
08.00-08.30	Opening ceremony - Indonesian National Anthem - Pray - Message from the Chairman of SIB (Widi Sunaryo, Ph.D)	Committee	Main Room
08.30-09.30	Keynote speaker: Assoc. Prof. Dr. Khairul Adha bin A. Rahim	Moderator: Prof. Dr. Andria Agusta	Main Room
09.30-11.00	Parallel presentation Group 1: AO-01 to AO-08 Group 2: AO-09 to BO-02 Group 3: BO-03 to BO-10 Group 4: BO-11 to BO-18 Group 5: BO-19 to CO-02 Group 6: CO-03 to DO-03 Group 7: DO-04 to EO-01 Group 8: EO-02 to EO-10 Group 9: EO-11 to EO-19 Group 10: EO-20 to EO-28	Moderator: Dr. Hafsah M.IL Moderator: Dr. Arida Susilowati Moderator: Prof. Ricardo F. Tapilatu, Ph.D Moderator: Prakash Pradhan, Ph.D Moderator: Yosep S Mau, Ph.D Moderator: Dr. Praptiwi Moderator: Assoc. Prof. Dr. Khairul Adha bin A. Rahim Moderator: Widi Sunaryo, Ph.D Moderator: Dr. Kusuma Dewi Sri Yulita Moderator: Dr. Joko R. Witono	R1 R2 R3 R4 R5 R6 R7 R8 R9 R10
11.00-11.30	Announcement and Closing	Committee	Main Room

Note: A. Genetic Diversity, B. Diversity of Species, C. Diversity of Ecosystem, D. Ethnobiology and Socioeconomics, E. Bioscience (Life Science and Technology); O. Oral.

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Note: A. Genetic Diversity, B. Diversity of Species, C. Diversity of Ecosystem, D. Ethnobiology and Socioeconomics, E. Bioscience (Life Science and Technology); O. Oral.

AO-08**Diversity of soil insect at Kutai National Park, East Kalimantan, Indonesia**

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Forests are a potential natural resource in supporting the diversity of flora and fauna. Kutai National Park is a low Dipterocarpaceae rain area that has a variety of potential flora with a number reaching 958 species, including 8 out of 10 genera in the Dipterocarpaceae family in the world. And one of the other resources in the forest is land surface insects. the presence of soil surface insects is needed to assist in the decomposition process. Diversity is one indicator of a community's stability. One resource that plays a role in the community is ground-level insects. The research was conducted in two locations, namely Sangkima and Prevab. The method used pitfall trap. The number of traps installed is 6 points with 12 traps. The traps were placed on a transect and carried out every week for four times. Samples were collected and identified to determine the species. Samples were identified at the Forest Protection Laboratory of STIPER East Kutai. The result found in the Sangkima area, 1989 individuals from 11 families and 8 orders were found, while in Prevab found 2324 individuals from 12 families and 9 orders. The dominant families in the Sangkima area are Scarabaeidae, Staphylinidae, Sphaeromatidae, Blaberidae while in prevab are the scarabaeidae family, formicidae family, and the Staphylinidae family. As conclusion the insect at prevab is more varied because of it has a different vegetation with sangkima.

Diversity, Kutai National Park, pitfall trap, soil insect

AO-09**Genetic diversity of *Shorea stenoptera* in West Kalimantan (Indonesia) in comparison with other *Shorea* species**

N. Sri Hartati, Hartati, Enny Sudarmonowati

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As one of *Shorea* species producing tengkawang in addition to its timber, *Shorea stenoptera* has been facing habitat loss and other disturbances which caused population decrease. Conservation efforts and genetic variation or diversity studies aiming at species improvement have been conducted by various institutions including private sectors by selecting plus trees for mother trees and conserving them in situ and collecting the wildings as the sources of superior planting materials. To ensure the wildings collected were from the plus trees parents, genetic relatedness and genetic similarity, in

addition to genetic diversity of plus trees and seedlings grown nearby the mature plus trees in several sites in West Kalimantan were assessed. The observed heterozygosity (H_o) of *S. stenoptera* collected from Gelora Dayak Barat (GDB) and Mandor was 0.198 while expected heterozygosity (H_e) was 0.338 assessed based on isozyme analysis. When these values are compared with DNA-based markers such as microsatellite marker for analyzing samples from Sintang, Sanggau and Ketapang of other research results, they were ranged from 0.532 to 0.696 and from 0.520 to 0.706, respectively. These results indicated that the genetic diversity of *S. Stenoptera* varied depending on the stage of growth of samples, sites and analysis used. The analysis could also differentiate the plus trees with different range of tree diameter and morphological characteristics as well as some wildings with the parents or the plus trees. Conservation strategy of *S. stenoptera* needs to be revisited in certain sites due to its low genetic diversity as compared to other *Shorea* species.

DNA-based markers, genetic diversity, isozyme, *Shorea stenoptera*, West Kalimantan

AO-10**Extraction of secondary metabolites of *Trichoderma viridae* with various organic solvents and their potential for controlling of *Colletotrichum gloeosporoides* causes of anthracnose disease in chili in vitro**

Urbailis, Akmal Jamaan, Yulmira Yanti

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Secondary metabolite compounds produced by *Trichoderma viridae* have the potential to be developed as biofungicides to control pathogenic fungi that infect plant parts above the soil surface. The purpose of this study was to obtain the best organic solvent in suppressing the growth of *Colletotrichum gloeosporoides* which causes anthracnose disease in chili plants in vitro. The design used was a completely randomized design (CRD) with 3 treatments and 5 replications. The treatments were 2 types of organic solvents: A. ethyl acetate solvent, B. butanol solvent and C. control (sterile distilled water). Parameters observed were: 1). Colony area, 2). Colony diameter, 3). Number of conidia, 4). Conidia germination, and 5). Number of propagules. The data were statistically analyzed using analysis of variance and LSD further test at a 5% significance level. The results showed that ethyl acetate and butanol solvents were able to attract secondary metabolites produced by *T. viridae* which the function as antifungal. Both extracts had the same ability to suppress the growth of *C. goeosporoides* which included colony diameter, colony area, number of conidia, conidia germination and number of propagules.

Colletotrichum gloeosporoides, extraction, secondary metabolites, *Trichoderma viridae*